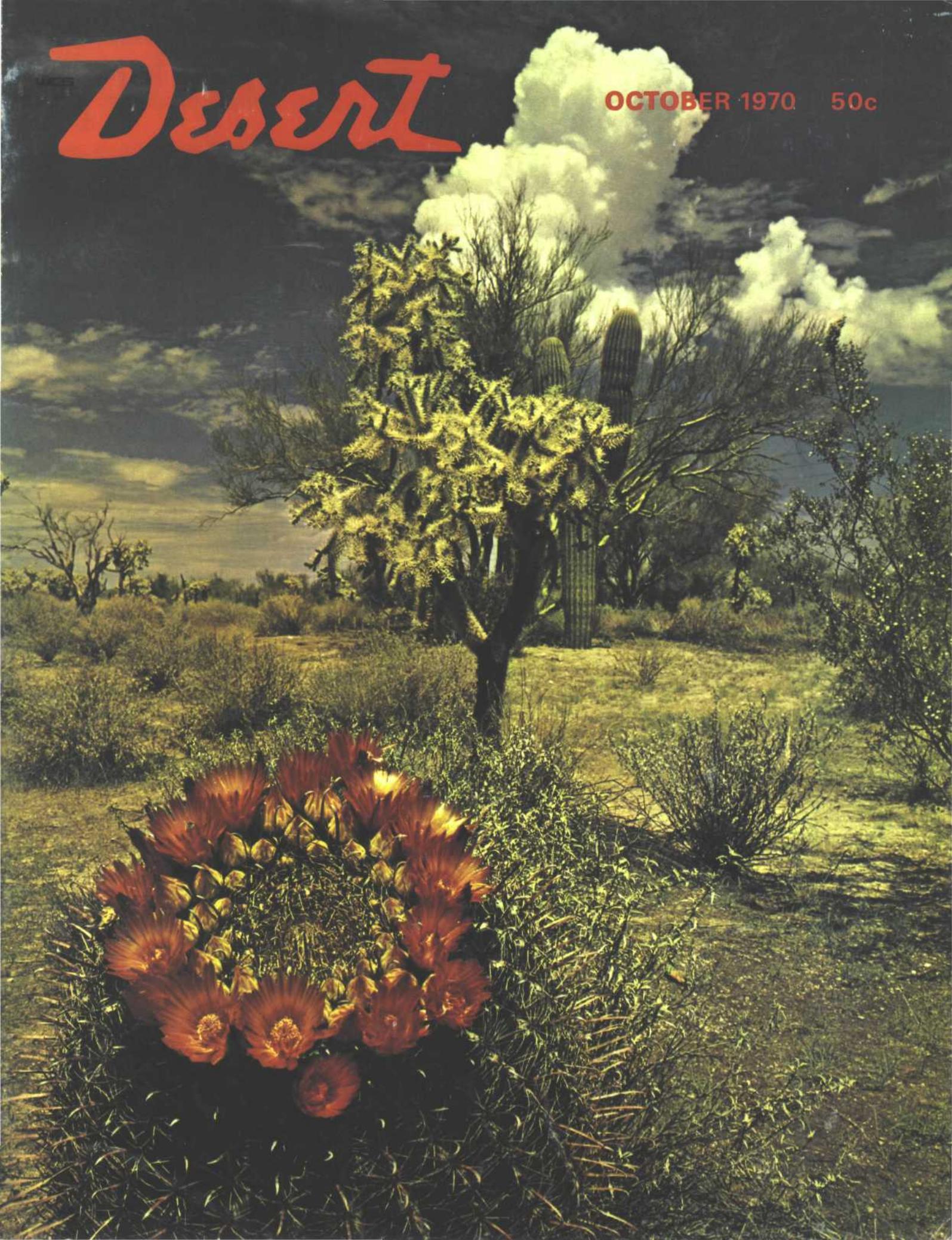


Desert

OCTOBER 1970 50c



Desert Magazine Book Shop

DUTCH OVEN COOKBOOK by Don Holm. Wild-life editor of the Portland Oregonian, the author has spent his life exploring and writing about the outdoors, so his recipes for preparing food in a Dutch Oven come from experience. If you haven't had food cooked in a Dutch Oven, you haven't lived . . . and if you have you will find these recipes new and exciting culinary adventures—as well as his style of writing. Heavy paperback, 106 pages, \$3.95.

A TRAMP ACROSS THE CONTINENT by Charles Lummis. First published in 1892, this is a reprint of the personal experiences of the western historian who, in 1884, walked from Ohio to Los Angeles, covering 3507 miles in 143 days. Lummis writes in a matter-of-fact manner of adventures which make fascinating reading and give a keen insight into the people he encountered. This is a classic of Western Americana. Hardcover, 270 pages, \$8.50.

BAJA CALIFORNIA BY ROAD, AIRPLANE AND BOAT by Cliff Cross. Author of a popular travel guide to the mainland of Mexico, Cross has compiled a comprehensive book on Baja California. The new guide is well illustrated with detailed maps of the villages and bays along the 1000-mile route plus travel, history and fishing information. Large format, heavy paperback, 170 pages, \$3.50.

SOUTHWESTERN INDIAN ARTS & CRAFTS by Tom Bahti. Beautifully illustrated with 4-color photographs, this book describes the arts and crafts of the Indians of the Southwest and offers suggestions on what to buy and how to judge authentic jewelry, rugs, baskets and pottery. Large format, heavy paperback, 32 pages, \$1.00.

INYO MONO JEEP TRAILS by Roger Mitchell. Author of DEATH VALLEY JEEP TRAILS, veteran explorer Mitchell takes you on 18 different 4-wheel-drive trips into the Sierra Nevada Mountains, where he explores ghost towns, Indian territory and scenic canyons and mountain passes. Paperback, 36 pages, illust., \$1.00.

LOST LEGENDS OF THE WEST by Brad Williams and Choral Pepper. The authors examine the "lore, legends, characters and myths that grew out of the Old West" in a sequel to their popular first book, *The Mysterious West*. Included among the more than 20 "lost legends" are such intriguing subjects as lost bones, lost ladies, lost towns, and lost diamonds. Hardcover, illustrated, 192 pages, \$5.95.

NAVAJO RUGS, PAST, PRESENT AND FUTURE by Gilbert S. Maxwell. Concerns the history, legends and descriptions of Navajo rugs. Full color photos. Paper, \$2.50.

WHEN ORDERING BOOKS PLEASE

Add 50 cents PER ORDER
(Not Each Book)
for handling and mailing

**CALIFORNIA RESIDENTS ALSO
ADD 5 PERCENT SALES TAX**

Send check or money order to Desert Magazine Book Shop, Palm Desert, California 92260. Sorry, but we cannot accept charges or C.O.D. orders.

RELIC
TRAILS TO TREASURE



RELIC TRAILS TO TREASURE

By WES & RUBY BRESSIE

Relics which recently were considered only junk, today are collector items. This book lists hundreds of items with their current value, including arrowheads, dolls, kettles, posters, bottles or what-have-you. With this price-guide you will want to take another look at the "junk" stored in your attic—or judge the value of your collections. Heavy paperback, 191 pages, profusely illustrated.

\$4.50

SOUTHWESTERN INDIAN TRIBES by Tom Bahti. An excellent description, history and current status of the Indians of the Southwest, including dates of their ceremonies and celebrations. Profusely illustrated with 4-color photographs of the Indian Country and the arts and crafts of the many tribes. Large format, heavy paperback, 72 pages, \$2.00.

SOUTHWEST INDIAN CRAFT ARTS by Clara Lee Tanner. One of the best books on the subject, covering all phases of the culture of the Indians of the Southwest. Authentic in every way. Color and black and white illustrations, line drawings. Hardcover, 205 pages, \$15.00.

GHOSTS OF THE ADOBE WALLS by Nell Murbar-
ger, the well known "roving reporter of the desert." An intimate chronicle of Arizona's once-booming mining towns, stage stations, army posts, marauding Indians and fantastic human characters. 380 pages, illustrated. Hardcover, \$7.50.

TERRIBLE TRAIL: the Meek Cutoff, 1845 by Clark and Tiller. Narrates the tragic tale of the Meek emigrant train and lays the groundwork for a solution to the Blue Bucket lost gold. \$4.00.

THE WONDERFUL PARTNERSHIP OF ANIMALS AND MAN by K. L. Boynton. A book that should be read by everyone interested in staying alive, it tells the story of how life on earth developed through the ages by plants and animals working together and how this partnership must work today so man can continue to exist on this planet. Large, Bx11 format, heavy paper, 48 pages, \$1.00. After reading this book you will realize why it is really a "matter of life or breath."

1200 BOTTLES PRICED by John C. Tibbitts. Updated edition of one of the best of the bottle books. \$4.50.

WESTERN CAMPSITE DIRECTORY by the Editors of *Sunset Books*. Just published, this book lists more than 5000 private and public campgrounds in the 11 western states and British Columbia and Western Alberta, including hundreds of new campsites to care for the ever increasing amount of people taking to the open road. Just right for planning a vacation. Large format, slick paperback, illustrated, 128 pages, \$1.95.

COLORFUL DESERT WILDFLOWERS by Grace and Onas Ward. Segregated into categories of red, blue, white and yellow for easier identification, there are 190 four-color photos of flowers found in the Mojave, Colorado and Western Arizona deserts, all of which also have common and scientific names plus descriptions. Heavy, slick paperback, \$4.50.

LOST DESERT BONANZAS by Eugene Conrotto. Brief resumes of lost mine articles printed in back issues of *DESERT Magazine*, by a former editor. Hardcover, 278 pages, \$7.00.

A GUIDEBOOK TO THE SOUTHERN SIERRA NEVADA by Russ Leadabrand. Illustrated with good photographs and maps, this volume covers the Sierra region south of the Sequoia National Park, including most of the Sequoia National Forest. Paperback, \$1.95.

NEVADA'S TURBULENT YESTERDAYS by Don Ashbaugh. The best book about Nevada's ghost towns and the rugged individuals who built them. 346 pages, \$7.95.

GHOST TOWNS AND MINING CAMPS OF CALIFORNIA by Remi Nadeau. The only good, hardcover book on the California ghost towns. We recommend it highly. \$5.95.

CALIFORNIA GOLDEN TREASURES by Charles Lauder. Treasure clues for the Mother Lode country. Full of tips and hints, paperback, \$3.00.

SOUTHWEST INDIAN COUNTRY by the Editors of *Sunset Books*. A concise and comprehensive guide covering the 48 reservations and Pueblo villages in Arizona, Utah, New Mexico and Colorado. Includes what to see, how to buy, conduct, history, and ceremonials. Large format, colored illustrations, heavy paperback, 80 pages, \$1.95.

GHOSTS OF THE GLORY TRAIL by Nell Murbar-
ger is a fast moving chronicle of Western boom-
camp and bonanza. Rich in human interest as
well as authentic history, this book covers ghost
towns of Nevada, western Utah and eastern
California. Hardcover, 291 pages. Price \$6.75.

GUIDEBOOK TO THE SAN BERNARDINO MOUNTAINS by Russ Leadabrand. Lake Arrowhead, Big Bear Lake and other mountain roads take you to resorts, lakes and picnic areas. Paper, \$1.75.

A FIELD GUIDE TO WESTERN BIRDS by Roger Tory Peterson. The standard book for field identification sponsored by the National Audubon Society. 2nd edition, enlarged with new section on Hawaiian birds. 658 in full color. Hardcover, \$5.95.

JEEP TRAILS TO COLORADO GHOST TOWNS by Robert L. Brown. An illustrated, detailed, informal history of life in the mining camps deep in Colorado Rockies. Fifty-eight towns are included the almost inaccessible mountain fastness of the as examples of the vigorous struggle for existence in the mining camps of the West. 239 pages, illustrated, end sheet map. Hardcover, \$5.50.

FOR COMPLETE BOOK CATALOG WRITE TO DESERT MAGAZINE, PALM DESERT, CALIFORNIA 92260

WILLIAM KNYVETT, PUBLISHER
 JACK PEPPER, EDITOR
 WALTER ARENDALE, *Advertising Manager*
 JACK DELANEY, *Staff Writer*
 JOLEEN ROBISON, *Woman's Viewpoint Editor*
 GLENN VARGAS, *Lapidary Editor*
 K. L. BOYNTON, *Naturalist*

Desert
 MAGAZINE

Volume 33, Number 10 OCTOBER, 1970

CONTENTS

FEATURES



THE COVER:

Drenched by late summer thundershowers, cacti will soon be blooming throughout the West. Photo by David Muench, Santa Barbara, California, shows a blooming barrel cactus, cholla and saguaro in the Sonora Desert of Arizona.

WHEN MICA TURNED TO GOLD	8	by Dorothy Robertson
SAGACIOUS SAGE GROUSE	12	by K. L. Boynton
LAND OF MANY PLEASURES	16	by Ernie Cowan
FUN IN PHINNEY CANYON	18	by Sam Petty
PALA	21	by Jack Pepper
ALONG THE BUTTERFIELD TRAIL	22	by Robert Likes
TRACKING THE TRILOBITES	28	by Joleen Robison
PEOPLE OF GRAN QUIVIRA	32	by Lois Terry

DEPARTMENTS

A PEEK IN THE PUBLISHER'S POKE	4	by William Knyvett
BOOK REVIEWS	6	by Jack Pepper
RAMBLING ON ROCKS	34	by Glenn and Martha Vargas
WOMAN'S VIEWPOINT	36	by Joleen A. Robison
DESERT LIFE	39	by Hans Baerwald
LETTERS	42	Reader's Comments
CALENDAR OF WESTERN EVENTS	42	Club Activities

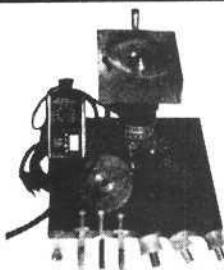
ELTA SHIVELY, *Executive Secretary*

MARVEL BARRETT, *Circulation Manager*

EDITORIAL, CIRCULATION AND ADVERTISING OFFICES: 74-109 Larrea St., Palm Desert, California 92260. Telephone Area Code 714 346-8144. Listed in Standard Rate and Data. SUBSCRIPTION RATES: United States, Canada and Mexico; 1 year, \$5.00; 2 years, \$9.50; 3 years \$13.00. Other foreign subscribers add \$1.00 U.S. currency for each year. See Subscription Order Form in this issue. Allow five weeks for change of address and send both new and old addresses with zip codes. DESERT Magazine is published monthly. Second class postage paid at Palm Desert, California and at additional mailing offices under Act of March 3, 1879. Contents copyrighted 1970 by DESERT Magazine and permission to reproduce any or all contents must be secured in writing. Unsolicited manuscripts and photographs WILL NOT BE RETURNED unless accompanied by a self-addressed and stamped envelope.

P.D.Q.

THE MOST VERSATILE UNIT
ON THE MARKET TODAY!



P.D.Q. - AS A CABLING AND PRE-FORMING UNIT, SHOWN IN PICTURE

Motor speed control	\$15.95
Off-set shaft—to mount lap pan	\$2.50
5" lap pan with hose	\$5.95
Diamond dish or flat disk; 4"	
180 grit	\$36.00
260 grit	\$31.00
600 grit	\$26.00
1200 grit	\$25.00

Arbor to mount dish or disk (sold only with the dish or disk)	\$5.00
4" Flat Starlap	\$3.95
Vial of thinner for diamond compound	\$5.50
Diamond compound to use on maple spoons	
1200 grit	\$5.50
8000 grit	\$4.00
14000 grit	\$4.00
Maple spoons on arbor, right or left 1 1/2"	\$3.00

CAB HEATER and WAX POT NO OPEN FIRES

Size 4" x 6" Complete with Cord ...
\$9.95

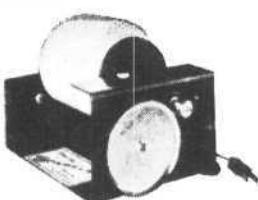
Cast aluminum to last a lifetime. Plug it in—just the right temperature—Not too hot to ruin wax or make it brittle. Heat cabochons on asbestos pad on heater.

No Mess — Try One
You won't part with it!!



MODEL 3A TUMBLER ONE BARREL 3 LB. CAPACITY **\$9.95 complete**

Outstanding features of Models 3A and 33B Gem Sparkle Tumblers are:



- Special molded heavy duty plastic barrel for long, long life. Will polish up to 3 pounds of rock in each barrel.
- Positive sealing screw type lid with neoprene lid gasket.

SEND FOR NEW CATALOG #9

SHIPLEY'S MINERAL HOUSE

On Hwy. 160 in southwest Colorado, 18 miles east of Durango or 1 1/2 miles west of Bayfield.

Mailing Address:

SHIPLEY'S MINERAL HOUSE, Gem Village,
Bayfield D, Colorado 81122
Phone: 303-884-2632

LOTTIE M. SHIPLEY



A Peek in the Publisher's Poke

HERE ARE not many who have not heard the expression "one picture is worth a thousand words." In many instances this is untrue, but certain people do have the ability to make the camera lens "speak". One such man is Hans Baerwald, whose works will be appearing regularly in DESERT Magazine under the title of "Desert Life" (see page 39). Dr. Baerwald, (a former veterinarian) has a feeling for our desert creatures and spends hours waiting for just the right

pose or setting. The Baerwald's yard in nearby Desert Hot Springs is a sanctuary within a sanctuary, the city itself is a wildlife refuge, as they maintain a good supply of food and water for their little friends. Many of his picture-studies are taken in the yard. Although he has a battery of 10 cameras at his disposal he favors a 35mm single-reflex camera fitted with a 600 millimeter telephoto lens, with a triple extension. With this awesome piece of equipment his photos bring you so close to the subject it seems almost an invasion of privacy. Here's a man who loves his work and shows it. I'm sure you'll agree that he belongs in DESERT.

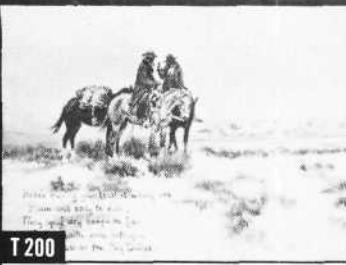
Another expression that has special significance to DESERT readers is "good things come in bunches". It is with great enthusiasm that we announce the appointment of Mary Frances Strong as Field Trip Editor effective with the November issue. Mary Frances' background is an envious one: Born in California, she spent her first eight years in the mining towns of Colorado's continental divide country. Her backyards were the mining dumps of Ophir, Telluride, Cripple Creek, Ouray and Breckenridge where her interest in our earth began and later led to a college major in geology with a minor in journalism.

Exploring and mapping the southwest desert country has been her way of life since her college days. In 1953 she joined the staff of *Gems & Minerals* where she held the position of Field Trip Editor for 16 years. During this time she traveled over 300,000 miles in California, Nevada, Utah, New Mexico, Texas and Oklahoma looking for gem fields, geological points of interest, old mines and ghost towns plus archeological sites. Her travels on the Mojave desert have been published as "Treasure Map of the Great Mojave Desert" and "Desert Gem Trails."

The Mojave Desert is her home and there are few miles of it she hasn't trod. For eight years she was the only other woman besides Nell Murbarger who habitually traveled the desert alone.

In 1961 she married Jerry Strong who shares her deep love of the desert country and does most of the photographic work accompanying her articles. Each fall finds them loading their pickup with trail bikes, cameras and rock hunting equipment, hitching on a trailer and with "Lobo" their 100-pound Alaskan Malamute, head out on new desert trails. Trails that will lead to many pleasurable hours of reading for her DESERT family.

I'll close with one more familiar expression: "Who's watching the store?" Jack and Bill are! Which is my way of telling you our bookshop will be open Saturdays from 9 to 3:30 beginning October 3. Come by and visit with us.



T 200

"Here's hoping your trail is a long one, etc." —
Merry Christmas...Good friends, etc. — C.M. Russell



T 222

Born to Run Free — Wishing you a Blessed Christmas and Happiness in the New Year — Steffen



T 235

Memories of a Frontier Christmas — Merry Christmas and Happy New Year — Swanson



T 147

"Blessed are they that have not seen" — May the Peace and Joy of Christmas, etc. — EchoHawk

CHRISTMAS CARDS OF THE WEST

TOP QUALITY ART IN BEAUTIFUL FULL COLOR

Bright colorful scenes fold to make a rich card 5 x 7. We can print your name, or ranch brand or BOTH in red to match the greeting. Also, your return address on the deluxe white envelopes — extras included. You will be proud to send these beautiful cards and you'll like our "stampede service" on orders right up 'till Christmas.

ORDER DIRECT FROM THIS AD OR
SEND FOR FREE SAMPLE AND CATALOG



T 203

Yucca Candles — May the Peace and Happiness of Christmas, etc. — Vannerson



T 223

"Whisper of a Pine Tree, etc." — Peace and Good Will at Christmas, etc. — Lau



T 205

A Memory of Christmas — May you have a Merry Christmas in the old-fashioned way, etc. — Stahley



T 228

Hello there, folks, etc. — Merry Christmas and Happy New Year — Marks



T 109

"In the heart of the wilderness" — May the Joy of Christmas be with you, etc. — Swanson



T 230

Surprise on the Trail — Merry Christmas and a New Year chuck full of Happiness — Thomas



T 220

A Good Day for Visiting — May the Spirit of Christmas Abide With You, etc. — Thomas



T 232

Christmas Eve on the Desert — May you have the Spirit of Christmas, etc. — Lau



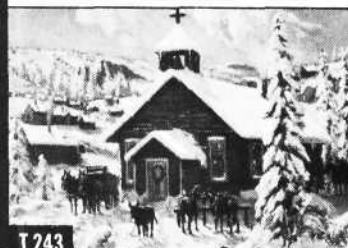
T 239

Caroling Neighbors — Thoughts of treasured friends make Christmas, etc. — FitzSimmons



T 248

"Thou fill'st the solitude." — Peace and Good Will at Christmas, etc. — Barks



T 243

"Within an old log church, etc." — May you have the Spirit of Christmas, etc. — Gomez



T 249

"Christmas Spirit" — May you and yours this Christmas Day and every day, etc. — Lowdermilk

HOW TO ORDER: Circle total quantity and cost. Mix and assort at no extra cost. Order all of one kind or as many of each as desired. Canada residents please remit in U.S. dollar values. Colorado residents add 3% sales tax. California residents add 5%. No C.O.D. Fill out coupon or order by letter and mail with check or money order.

TOTAL QUANTITY	12	25	50	75	100	150	200	300	500
WITHOUT NAME	\$2.25	\$4.25	\$8.50	\$12.50	\$16.00	\$23.50	\$31.00	\$46.00	\$74.00
WITH NAME OR BRAND	\$3.25	5.50	10.00	14.50	18.00	26.00	34.00	50.00	80.00
WITH NAME AND BRAND	\$4.50	6.75	11.25	15.75	19.25	27.25	35.25	51.25	81.25
RETURN ADDRESS	\$1.25	1.50	2.00	2.25	2.50	3.00	3.50	4.50	6.50

FILL IN QUANTITY DESIRED OF EACH CARD IN BOX BESIDE THAT NUMBER	T 200	T 220	T 230	T 243
	T 203	T 222	T 232	T 147
	T 205	T 223	T 235	T 248
	T 109	T 228	T 239	T 249
	T 114	RUSH FREE SAMPLE AND CATALOG		

NAMES TO BE PRINTED ON CHRISTMAS CARDS (ENCLOSE DRAWING OF BRAND)

SEND CARDS

AND/O CATALOG TO:

Rte., St., or Box No. _____

City _____

State _____

Zip _____

2B

THE LEANIN' TREE RANCH

BOX 1500 • BOULDER • COLORADO • 80302

POSTAGE FREE • MONEY BACK GUARANTEE
21 YEARS OF HAPPY MAIL ORDER CUSTOMERS

The delicate balance between life and its environment . . . the relationship of plant to animal, and of both to their surroundings . . . the ecology of meadow, lake, marsh and forest, algae and dragonflies, deer and jays . . . the cyclical progress of the seasons — all are lovingly portrayed in beautiful, simple language and drawings by a sensitive artist, who guides us about her 40 acres of land, high in the thin, clear air of the Colorado Rockies.

BEYOND THE ASPEN GROVE

By ANN ZWINGER

With 208 line drawings. \$8.95, now at your book-store, or use coupon below to order from

RANDOM HOUSE 

To your bookseller, or
RANDOM HOUSE MAIL SERVICE,
Dept. DM-10, P.O. Box 686,
Lynbrook, N. Y. 11563
Please send me BEYOND THE ASPEN GROVE by Ann Zwinger, for which I enclose check or money order for \$8.95, plus 50¢ for postage and handling (and applicable sales tax if any).

Name _____
Address _____
City _____ State _____ Zip _____

Book Reviews

by Jack Pepper

CALIFORNIA TRAVEL GUIDES

By the Editors of *Sunset Books*

For presentation purposes, the editors of *Sunset Books* have divided California into two parts for their newly-revised and up-to-date travel guides to the Golden State.

An imaginary boundary line was drawn beginning at the ocean near San Simeon, continuing across the Coast Range and the southern tip of the Central Valley, and then turning northward across the Sierra Nevada range south of Yosemite National Park.

The two areas differ dramatically in climate, history, topography and temperament. Both books are well illustrated with black and white photos and contain excellent, detailed maps. In addition to suggestions of where to go and what to see, the editors furnish historical background of the areas.

Travel Guide to Southern California covers the Los Angeles Area, San Diego and Over the Border, Palm Springs and the Southeast Desert, Mojave Desert and Death Valley, The Sierra and the Valleys and Santa Barbara and Up the Coast.

Travel Guide to Northern California includes San Francisco, The East Bay, North Bay Counties, North Along the Coast, South From San Francisco, Monterey Peninsula, Central Valley, Sierra Nevadas and the Northern Mountains.

Both are large 8 x 11 format, 4-color cover, heavy paper. \$1.95 each. WHEN ORDERING SPECIFY WHICH BOOK.

FOUR WHEEL DRIVE HANDBOOK

By James T. Crow & Cameron Warren

Two veteran back country drivers have put together a long overdue book on how to drive, what to do, and what to take when you are headed for the wilderness.

Whether you are a neophyte or a veteran, you'll find valuable information in this book—information which might save your vehicle or your life.

The material packed into this volume was gathered from actual experience in the field and is presented in a detailed manner so it can easily be followed and understood.

Included among the many chapters are Why Four Wheel Drive?, Options and Accessories, Driving Techniques, Tire Troubles, Ignition Troubles, Cautions and Precautions and many others.

There is one chapter on the various makes of four-wheel-drive vehicles on the market and their performances. Although this reviewer has spent 20 years driving the back country of the West, he is not a vehicle test driver (although I have owned most of the popular 4WD vehicles) so will not comment one way or the other on this particular chapter.

This book is highly recommended for anyone who has been bitten by the bug of back country driving . . . and once you have been bitten, there's no cure! Paperback, illustrated, 96 pages, \$2.50.

A GOOD BOOK FOR THE LAPIDARY HOBBYIST

"TUMBLING TECHNIQUES AND ASSEMBLING BAROQUE JEWELRY"
2nd Edition (By G. L. Daniel)

This complete illustrated book takes a step-by-step approach to the techniques of tumbling gemstones and assembling jewelry. Very clear, very well organized. ★ Tumbler Types ★ Speeds ★ Preparation of Material ★ Charging ★ Grits, coarse, fine ★ Polishing ★ Cementing ★ Epoxy Setting ★ Wiring ★ Layout ★ Packaging ★ Helpful Hints

\$250

Calif. residents add 13c sales tax

Order direct or pick one up at your local Rock Shop.

GORDON'S

P.O. BOX 4073D LONG BEACH, CALIF. 90804

LOST MINES AND BURIED
TREASURES ALONG THE
OLD FRONTIER

By John D. Mitchell

The second of John D. Mitchell's books on lost mines in the western hemisphere, which were out-of-print for many years, is now available again.

This book, and Mitchell's first, *Lost Mines of the Great Southwest*, (see Book Reviews, Sept. '70), have been reprinted from the original copies by The Rio Grande Press, Inc., of Glorieta, New Mexico. Both are available through the Desert Magazine Book Store.

Mitchell spent the majority of his life living in Arizona and traveling throughout the West tracking down and investigating legends of lost mines. He was not only an exhaustive researcher, but also had a flair for presenting the material in a dramatic way.

Many of the lost mine articles (each one is a chapter) in his second book, appeared in Desert Magazine 20 years ago. Since these magazines are no longer available, lost mine buffs now have a chance to read the legends first-hand. An original map, first published with the book, and one pinpointing the areas of the lost mines, has also been reproduced.

Although current readers of Desert Magazine will be familiar with many of the lost mines listed by Mitchell, he provides additional first-hand information on these, and describes many others which are not as well known. Hardcover, 240 pages, \$7.50.

1200 BOTTLES PRICED

By John C. Tibbitts

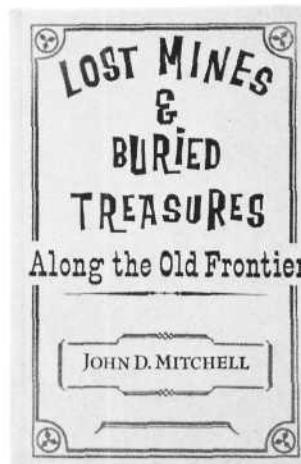
After 10 printings of the original, the author has completely revised and brought up to date his popular *1200 Bottles Priced*. Tibbitts is author of eight books on bottle-collecting and is a charter member and was first president of the Antique Bottle Collectors Association.

The two major and important changes in this revised edition is that every bottle has been repriced to the 1970 market, and a complete index added. The 1200 bottles listed are classified and briefly described as to color and form. General categories of the bottles are illustrated. Slick paperback, 171 pages, \$4.95.

NOW AVAILABLE!!!

Two Great Lost Mine Books

by JOHN D. MITCHELL



LOST MINES AND
BURIED TREASURES
ALONG THE
OLD FRONTIER

\$750

Postpaid

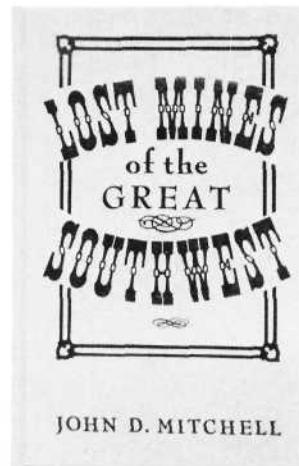
Calif. residents add
5% state sales tax

LOST MINES
OF THE
GREAT SOUTHWEST

\$750

Postpaid

Calif. residents add
5% state sales tax



JOHN D. MITCHELL

ORDER FROM

DESERT MAGAZINE BOOKSHOP

PALM DESERT, CALIFORNIA 92260

Please send check or money order

When Mica Turned to Gold!

by Dorothy Robertson

The ghost town of Hayden Hill is located in scenic Big Valley in Northern California near Lassen Volcanic National Park. The main ghost town is accessible by passenger car, but back-country vehicles are needed to explore surrounding isolated areas.

HAYDEN HILL's genesis began when a group of well-armed Yrekanis went into the Big Valley country in the early fall of 1869 to hunt for the Lost Cabin Mine. The party kept close together as they combed the primitive wild northeastern California region for the Indians were actively hostile.

On the last night in the region they camped on the slopes of a high hill, close to a spring seepage. It was Reverend H. D. Haskins' turn to cook the next morning. The men decided to make one last search in the higher reaches of the hill upon which they were camped.

After the men had left camp, Haskins decided, as his last good turn of the day, to clean out the muddy spring for the benefit of any others who might be passing that way. While he was shoveling out the wet mud he noticed a great deal of shiny material which he thought was mica. Yet, as he examined the glittering specks, excitement mounted. Could it possibly be gold?

As the rest of the party returned to

camp, Haskins called them over to examine his find. But no one else could hazard a guess either. All agreed it had too much glitter to be real gold. It must be mica. However, some prudently gathered up some of the shining material to take back to Yreka for assay.

Once home, the assay reports showed the specimens were tiny bits of gold! Immediately the men rushed to gather supplies, enough for a protracted stay on the hill bordering the Big Valley to the east. There they spent the entire winter, despite the cold and snow, mining feverishly, and at the same time, fighting off Indians.

By spring, J. W. Hayden and Seneca Lewis had arrived and located several claims on the north and east slopes of what the miners called The Hill. Shortly thereafter the fast-growing settlement was called Providence City.

Hopeful miners began to pour into the burgeoning diggings. Soon Providence City boasted several saloons, a restaurant, a hotel, a postoffice and school,



In use only a short time, the bull of the mill still stands on Hayden Hill overlooking Big Valley.

flour, beans and bacon. And then in 1916 State mining reports noted that two rich veins remarkable for the small amount of quartz contained therein, had been uncovered on Hayden Hill. Also, that small nuggets were found, and that much of the Hayden Hill gold occurred

in fine, sandy, clay-like material which made crushing unnecessary.

That year, from the Golden Eagle Mine alone, more than a million dollars in gold was taken out, while a total of \$2,593,000 in gold was taken from the few working mines on Hayden Hill.

Some of the mines once operating on Hayden Hill were the Sunrise, the Evening Star, the Idaho and the Bluebell; the Golden Eagle, the Daisy Dean, the Leora and the Juniper; the Gray Goose, the Brush Hill, the Mount Vernon and the Lucky Star.

continued



a butcher shop, livery and feed stables, a blacksmith shop and a newspaper, *The Mountain Tribune*. The peak population reached 3000.

The Providence Mining Company realized some \$40,000 from washing the decomposed quartz. However, unfortunately for the partners of the Providence, they became involved in a mill enterprise with a San Francisco company whose superintendent knew nothing of mining. After crushing 100 tons of wall rock in which no pay dirt was found except from that obtained from the vein on the surface of the mine, the disgusted partners condemned The Hill and packed off their mill.

Although there was gold on The Hill, it was of such low grade it was by-passed, and one by one the miners began drifting away.

By 1874 Hayden and Lewis had the entire Hill to themselves and it became known as Hayden Hill—the name it bears today. Hayden and Lewis stayed on, realizing enough gold to keep them in

THE ALASKAN CAMPER®

GAME FOR ANYTHING

HYDRAULIC CONTROL ►
IT RAISES-IT LOWERS

▼ DOWN FOR TRAVEL SAFETY

FOR TRAVEL SAFETY

▲ UP FOR LIVING COMFORT

UP

▼ DOWN FOR TRAVEL SAFETY

Wind resistance is reduced with Alaskan's low profile in highway travel. Gas mileage is increased and crosswind cut down. With lowered top, passengers ride in luxurious comfort.

▲ UP FOR LIVING COMFORT

Alaskan camper top, operated by patented hydraulic system, is raised in seconds. (Let a child do it, and see how easy it is.) Safety lock prevents accidental lowering. Weather-tight, walk-in quarters completely furnished. Three-burner stove, stainless steel sink, cabinets, icebox, beds, plus many other luxury features.

8 ft. and 10 ft. models. Sold and installed only at Alaskan Camper factories at factory prices. Also available at authorized factory outlets.

Write today to the factory nearest you for free folder describing the most advanced camper on the road.

R. D. HALL MFG., INC., 9847 Glenoaks Blvd., Sun Valley, (San Fernando Valley) California 91352, Dept. D 2

Factory Outlet: ALASKAN CAMPER SALES, INC., Interstate 80 (half way between S.F.-Sacramento), Route 1, Box 332, Suisun City, Calif. 94585, Dept. D 2

ALASKAN CAMPERS NORTHWEST, INC., 6410 South 143rd Street, (Tukwila) Seattle, Washington 98168, Dept. D 2

PENNACAMP, INC., 401 West End Avenue, Manheim, Penn. 17545, Dept. D 2

G. R. GRUBBS MFG., INC., d/b/a Alaskan Camper Sales, 9042 Long-point Rd., Houston, Texas 77055, Dept. D 2

FORT LUPTON CAMPERS, 1100 Denver Ave. Fort Lupton, Colorado 80621, Dept. D 2

EINARS CAMPER MFG. CO., d/b/a Alaskan Campers North Central, 3726 North 9th Avenue, Sioux Falls, South Dakota 57104, Dept. D 2

U.S. PATENT NO. 2879103

CANADIAN PATENT NO. 637-543

Make Your Outings More Fun and Profitable Too!

METAL DETECTORS

• Detectron

• Excelsior

Get the Best . . .

Top Guarantee . . .

Easy to Operate

From

\$119.95 to

\$165.00



Stop By And See Our . . .

Western Artifacts, Indian Collection, Jewelry Display, Lapidary Equipment, Tumblers, Gold Pans, Dry Washers, Books on Treasures and Lost Mines . . . and other items of fun for the entire family. For information just write to or call:

COMPTON ROCK SHOP

1405 South Long Beach Blvd.

Ph. 632-9096

Compton, Calif. 90221



Amazing
Educational
No Care Required

GLASS GARDEN

6 Plants in 1 \$2.00

Even people who don't have "luck" with most house plants will succeed with this packet of six woodland plants (Red Partridge Berries, White Flowering Rattlesnake Plantain, Tree-like Ground Pine, Fern-like Club Moss, Palm tree-like Pipsissewa, Carpet-like Sheet Moss) that will fill any gallon-size container with a miniature garden in 2-3 weeks. No care needed. Easy instructions included. Full satisfaction guaranteed or return shipping label for refund. Send \$2.00 for 1, \$3.75 for 2, or \$5.00 for 3 Glass Garden packets. We pay the postage.

— Please Print Plainly —

2800 NO. HOLLISTON AVE.
ALTADENA, CALIF. 91001

Please send Glass Garden Packets. I enclose \$

Please send free catalog.

Name _____

Address _____

City _____ State _____ Zip _____



Exploring and looking for artifacts and bottles, the author's party spent two days in the Hayden Hill area. Near the Nevada border, the site is seldom visited.

Ironically, it had been Seneca Lewis who had discovered the Brush Hill Mine, only to sell out for a paltry sum to G. F. Hoes and the brothers Lee L. and W. F. Harbert, owners of the nearby Evening Star. These three partners then proceeded to take out in excess of one hundred thousand dollars in gold from the Brush Hill property. Though both Hayden and Lewis discovered many good mines in their day, both died poor men.

Today Hayden Hill is listed as an historic ghost town of pioneer days. Visitors pass through some of the most scenic country to be found in Lassen County—a land of green meadows, cool mountains, lakes and streams teeming with trout. At sunset and early morning, travelers will encounter deer and antelope. There are gray honkers, swans and pheasant and ducks seen in watered regions.

Although the Hayden Hill country is off the traveled ways, it is an interesting and scenic place to visit. Its old weather-worn gray buildings still stand, including the old mill up on the brow of the hill.

Bottle collectors find numerous old dumps scattered over the Hill worthwhile, while rock collectors are interested in the colorful Wonder Stone of the region—delicately tinted and beautifully patterned in shades ranging from cream

to yellow-into-orange and reds, and swirled in browns. Larger, heavier slabs of this material are ideal for stepping stones in gardens, or up-ended, as borders for flowerbeds.

Hayden Hill is easy of access and easy to find. It is only 14 miles south of Adin in Big Valley, California, off State 139. The Hill turnoff itself is signed. The Hayden Hill mountain road climbs in a westerly direction for four miles to the diggings. A word of caution to visitors with dogs and youngsters. The mine shafts are very deep and some not covered. Also, remember that there is no drinking water available and Hayden Hill is remote, so fill up with gasoline at Adin before venturing out into the rugged back country!

Once you reach this fascinating region you will be amazed at the scenic beauty. Far below The Hill lie vast valleys and beautiful Sylvie Lake in the middle distance. In the farthest distance rises glittering, snow-draped Mt. Lassen, and over a hundred miles northwestward is sparkling Mt. Shasta.

Today the only sounds heard among the old weathered relics of buildings of Hayden Hill are winds blowing up memories of a hustling settlement of days gone by. □

FAVORITE '40s BACK ISSUES

READ AGAIN

THE
OLD FAVORITES:

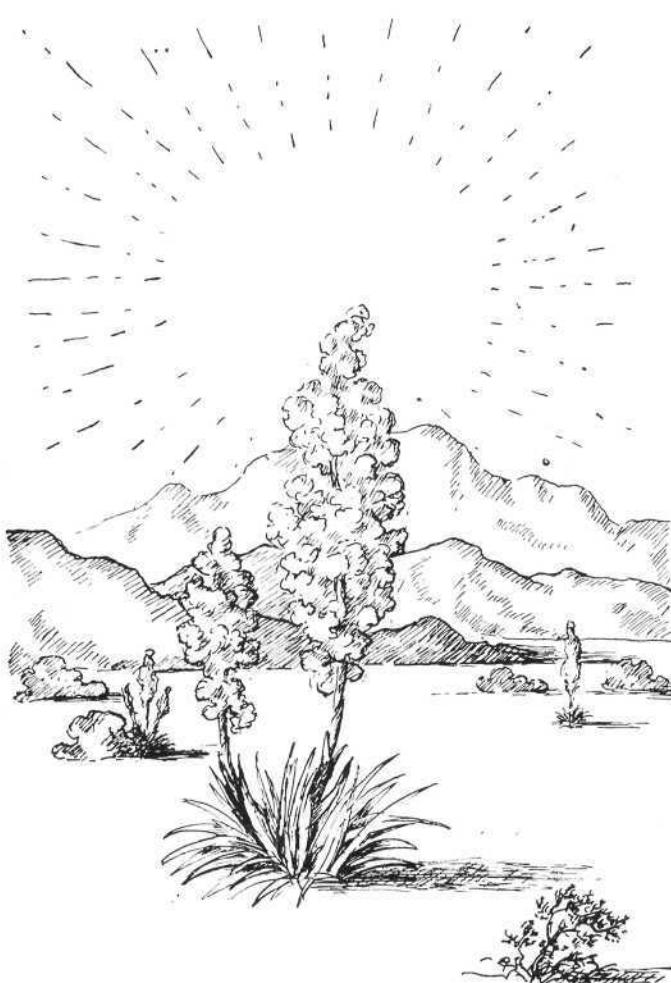
RANDALL HENDERSON
HAROLD WEIGHT
EDMUND JAEGER
JOHN HILTON
MARSHAL SOUTH
JOHN MITCHELL
NELL MURBARGER

ASSORTED 1940 THROUGH 1949

NOTE:

THIS OFFER IS LIMITED
TO THE SUPPLY ON HAND
ON A FIRST-COME BASIS.

THIS IS A PRE-PACKAGED OFFER
DO NOT SPECIFY MONTHS



SIX ISSUES

\$3.00

Send check or money order to

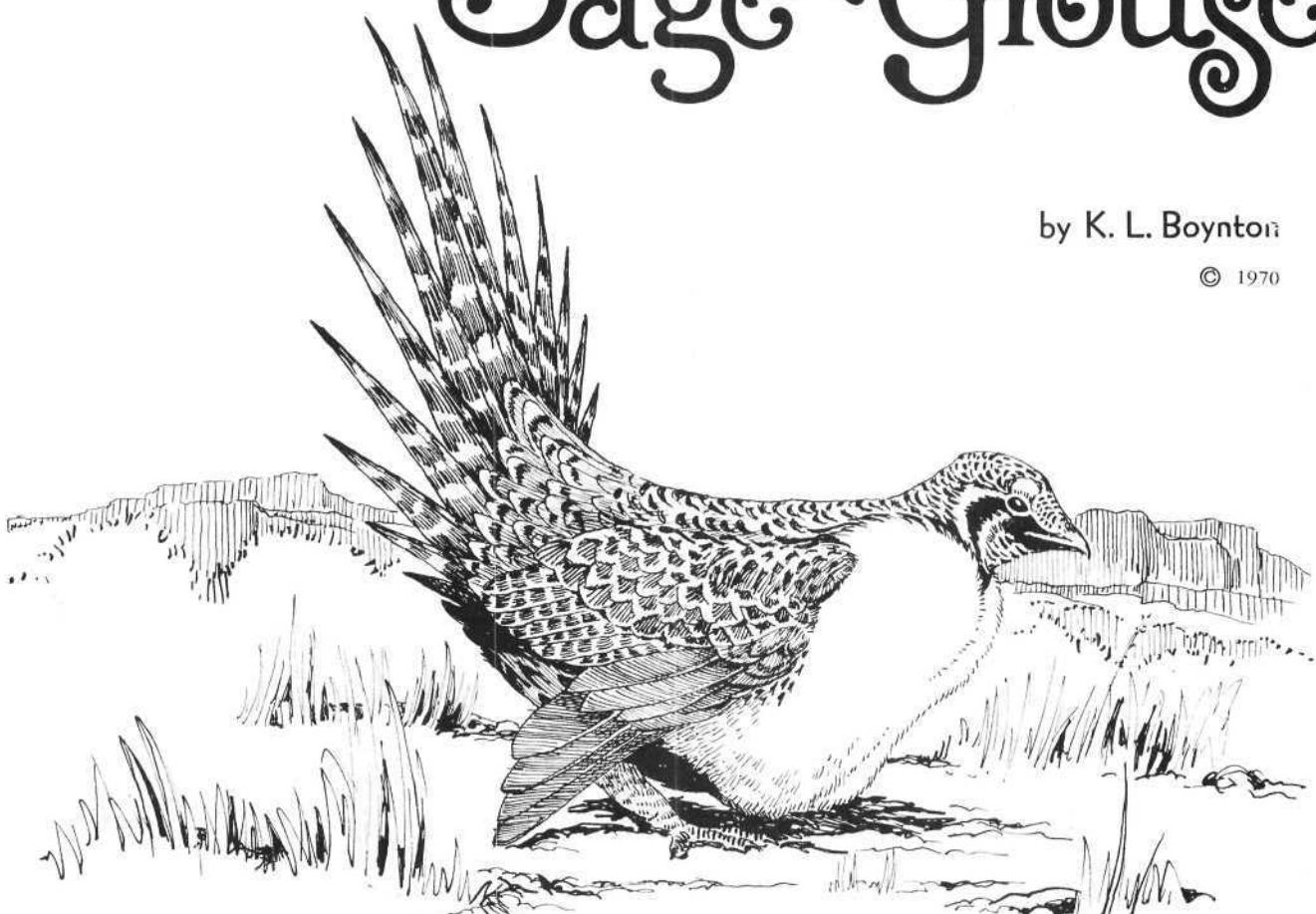
DEPARTMENT 6

DESERT MAGAZINE

PALM DESERT, CALIFORNIA

92260

Sagacious Sage Grouse



by K. L. Boynton

© 1970

DESERT DWELLER since ancient times, the stately sage grouse is lord of the high places. His is a desolate kingdom of vast and windswept plains and buttes, of sub-zero blizzards in winter, of parched and shimmering heat in summer. Big and powerful, supremely confident, he knows how to live in this most formidable desert land.

He is also a most satisfactory bird from the scientific standpoint. Ecologists, greatly impressed with his success, view him as a beautiful illustration of the working of a most important kind of plant-animal relationship: the climax community.

"Climax" here is the top of the ladder,

so to speak—the last step up—the stage at which an area, after undergoing a long, long series of successive changes, finally reaches a fairly stable situation. Certain plants have become the dominant vegetation; certain animals, the dominant inhabitants of the community.

So well established are these particular plants and animals, so well in tune with all their interacting environmental conditions that they successfully keep other plant and animal competitors from gaining a significant foothold, and hence from changing the status quo of the climax community. Barring any great disasters such as geological upheavals, fire, flood or man poking his nose in and up-

setting things, a climax community will remain essentially the same.

In the high deserts of the Great Basin (that vast area lying between the Rocky and Sierra Nevada Mountains) a sagebrush vegetation climax evolved about 30 million years ago under changing geological conditions, most of them bad. Sagebrush weathered them all. It developed into an exceptionally hardy plant—stunted, even prostrate on the ground in extremely poor soil, but growing some 10 feet high where there is water. It is the dominant plant of the area, an evergreen shrub, the only one to flourish the year around, snow or not. Evolved under such harsh environmental conditions, sage-

brush today is tough and well equipped for survival.

So is the sage grouse. For, as the plant evolved to stand the desert's high elevations, long sub-zero winters, its winds and drifting snow, so did this grouse. A big bird — some 24 inches long and weighing as much as 7 pounds in top form, he can meet every demand put upon him. Capable of long flights in search of food, shelter or water, he is equally well adapted to cope with howling blizzards, and blasting heat. He is a true dominant inhabitant of the sagebrush climax community.

Key to the bird's welfare is sagebrush itself. While many small mammals and some big game eat this plant at certain seasons, none is so dependent upon it the year around. Sagebrush provides the adult grouse with a minimum of 80% of its summer food, almost 100% in winter. The birds consider the leaves, tender shoots, flowers most tasty. They couldn't eat anything more nutritious.

Recent analyses show that some 16% of this plant is protein, 46% carbohydrates, and an astonishingly high 14% fat. (Five times more than any other desert plant tested.) The heavy fat content of sagebrush is the grouse's life-saver in winter, keeping him warm, and stocking

him up to prime weight and condition for the coming arduous breeding season.

Besides furnishing the groceries, sagebrush comes in a wide variety of styles perfect for grouse shelter. Snow encrusted, a clump makes a fine winter wind-break. For summer midday siestas, the taller, thicker growth is the best sun shield. Shorter sagebrush, widely enough spaced to allow a quick getaway if wildcats come prowling, is best for squatting under at night, as these grouse do not roost.

The bird's association with the plant starts early in life. In fact, probably the first thing a chick sees upon stepping damply out of his shell, is sagebrush. The nest he's in is under a low tangle of it, his mother (a hen of discernment) having selected the spot ideal for egg-hiding.

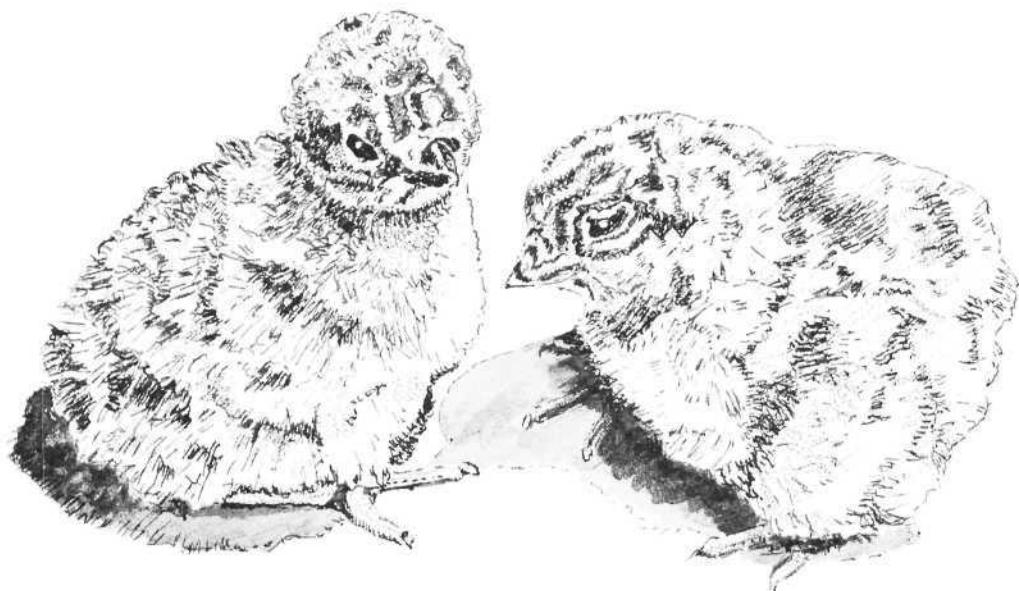
Sage grouse chicks arrive in a ready-to-go fashion. They've spent 25 days in the egg putting the finishing touches on nervous systems, bones and musculature eyes and the like, instead of taking half the time, but being only half-done at hatching as are song birds. Bright eyed and warmly dressed in soft down, patterned in blotches of greyish black, sage grouse chicks dry quickly in the desert air.

Biologist Girard reported seeing a brood leave the nest only 17 minutes after the last chick hatched. Trekking along sturdily after their mother, they headed for a small hollow with free water in it some 162 yards distant—a long walk for a hatchling. Here was to be found a goodly supply of insects, this heavy protein matter making up about 75% of chick diet the first month. Tender sagebrush leaves account for most of the rest, the percentage reversing quickly in favor of the plant as the weeks go on. It took the brood two hours to travel the distance, the hen having her troubles keeping the chicks from wandering off to see the big world right away.

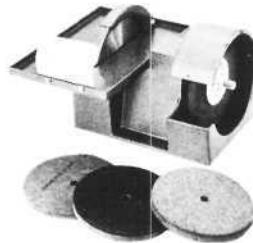
Straying chicks continue to be a problem. It is essential they stay close to the hen, for it is from her that they learn what's good to eat and how to get it. Also, until their own internal warming machinery get to working properly, they must be brooded periodically during the day, and they sleep under her wings at night.

The hen is also their first line of defense. From the moment of hatching, the chicks know instinctively how to run and hide at her command while she creates a diversion. Hers is the old phony broken-

When just one-day old, sage grouse chicks start toddling, much to the concern of the mother grouse who has a difficult time keeping them under the protection of sagebrush.



TURN THOSE DESERT ROCKS INTO BEAUTIFUL GEMS



ALL NEW MODEL T ROCK RASCAL GEM MAKING UNIT

COMES COMPLETE WITH 6" DIAMOND BLADE,
GRINDING WHEEL, SANDING DISC AND
POLISH DISC

JUST \$49⁵⁰

PLUS POSTAGE (Wt. 11 lbs.)

TUMBLE YOUR GEMS
TO A BRILLIANT POLISH
WITH



THE SPARKLE TUMBLER
HOLDS 3 LBS. OF GEM MATERIAL

FOR ONLY \$11⁵⁰

PLUS POSTAGE

GORDON'S ALL-NEW 1970 CATALOG

IS NOW AVAILABLE. OVER 250 PAGES
OF MOUNTINGS, TOOLS AND SUPPLIES.
A MUST FOR NEW ROCKHOUNDS
\$1.00, REFUNDABLE
WITH ANY \$7.50 ORDER.
SEND NOW OR DROP INTO OUR
LARGE STOCKED SHOP
FOR ALL YOUR NEEDS

Gordon's
1741 CHERRY AVE
LONG BEACH, CALIF. 90804
P.O. BOX 4073D

wing-routine, flopping along the ground until almost caught, and then zooming off in flight. But when all is safe, the scattered chicks have to be rounded up again. Clucking and calling, the hen goes to a sagebrush clump or small mound where she can best be seen, and the chicks, whistling plaintively, come straggling in.

The whole job of incubating and family raising is carried on by the hens alone, the cocks staying far, far away from the hard work. Theirs is a more stellar role in the sage grouse domestic drama, played early in the spring. Zoologist Scott was the first to describe the performance, and Patterson's work supplied more details and interpretation.

About the middle of March in the high desert, in snow or not, the curtain goes up on THE GREAT SAGE GROUSE SPECTACULAR—a super colossal wooing season of some two months duration involving a cast of hundreds. It is also an elaborately staged affair, held in open places reserved for courtship and used year after year . . . arenas that may vary in size from a few hundred square feet to perhaps several acres. Even in drier sections where the population is low, there is an arena about every five miles. The show is marked by a highly evolved ceremony, and it is put on by a complex hierarchy of master cocks, sub-cocks and guard cocks, each with his special role to play.

Rammed full of protein and layered with fat from a winter's eating of super-nutritious sagebrush leaves, perhaps as many as 60 cocks assemble in one of

these bare arenas to battle each other for the major roles. Yearlings are driven off at once. Then the others, with much clucking, hissing and threatening, finally settle down to fighting it out. The strongest and toughest becomes star of the show, the cock who will do three-quarters of the mating in this arena. The sub-cock, next in line, handles the rest. Next come several guards who keep intruders out of the arena, and act as marshals for the hens. By early April, when the hens begin coming, the roles have all been determined, and everybody knows his lines.

Winning the battles and hence the stellar role is just the beginning, for the major cock must then captivate the hens, since in sage grouse circles, wooing is done only at the invitation of the ladies. What has proven to be most successful down through the ages, is a strutting cakewalk accompanied by sound effects, staged in the witching hour of pre-dawn twilight, when the desert is silent, waiting for day.

Clad in full nuptial plumage, the magnificent big cock is a symphony in black and dazzling white. He hoists his long black tail feathers up into a stiff fan, raising the trailing filoplumes on the sides of his neck into a lyre-shaped crown. But still more splendor is to come.

Gulping in air, and inflating enormous air sacs that lie either side of his windpipe, he produces his costume's *piece de resistance*: two great orange colored balloons of bare skin that appear suddenly among the stiff white feathers of his chest. A tasteful splash of color to the formality of his ensemble, these sacs are

FOR SALE

SHARP 1967
JEEP WAGONEER



One-owner, A-1 condition, 4-wheel drive, standard transmission, 327 V-8 engine, radio, heater, mud tires, Warn hubs, limited slip rear axle.

Write or call

DESERT MAGAZINE, Palm Desert, California 92260
(714) 346-8144

also responsible for his show's orchestration, for his pompous cakewalk is done to music.

Now the cock begins his strutting, hunching up his wings and swishing their edges along the feathers of his cape as he takes a few steps forward. His orange sacs, fully inflated and bouncing on his chest vibrate like skins of a drum and out rolls a booming plopping sound of such resonance it carries for at least 3 miles.

Naturally no hen within earshot can resist this compelling overture music. Demurely dressed in brownish grey and white speckles with touches of black, they slip through the sagebrush into the arena. Gathered in small admiring groups, surrounded by the guards, they watch the cock strut his stuff, until dazzled by his magnificence, overcome by such beautiful plopping and booming, they succumb to his charms, one by one.

The nest building-brooding season is now underway and the grouse, although basically convivial birds, are all too busy for socializing. The hens have family chores, the cocks have gone off by themselves to recuperate and loll away the hot summer, feeding early in the morning, early evening and beating the heat by inactive resting under a sagebrush during the day.

Except for occasional meetings at special feeding places, the hens and chicks see neither hide nor feather of the cocks until it is time later in the fall for the whole flock to gather and fly down to the lower elevations to escape the extremely deep snow of the high deserts

that completely covers their food supply.

Even in the lower deserts the winter is tough, but the grouse are well dressed for it with thick layers of down and water-shedding top feathers. They even have special snowshoes, comb-like fringes that grow out in the fall along each side of all three toes, spreading the birds' weight so that they can walk over the snow. Like all members of the grouse tribe, their nasal openings are completely feathered, but in addition, they have a shut-off valve inside that closes up the nostrils and keeps out blowing snow. Hence they can feed unconcernedly even on windswept ridges during heavy winter storms.

Dependent one hundred percent on sagebrush with occasional insect larvae and eggs from plant galls, the grouse has trouble if the snow is too deep. Fortunately pronghorn antelope (see Desert, Sept. '70) also eat this shrub at this season, and in pawing away the snow, expose leaves for grouse to get at, too.

By January, the cocks start practicing their strutting in private. It will soon be curtain time again, and that show of shows must go on!

CANCELLATION NOTICE

ALL-INDIAN POW WOW
YUCCA VALLEY, CALIF.
SEPT. 19 and 20

Lowest Photo Prints Price Highest Quality

KODACOLOR FILM DEVELOPED & PRINTED

8 Jumbo Prints (rectangular)	\$1.78
12 Jumbo Prints (square)	\$2.18
12 Jumbo Prints and New Roll of Kodacolor except 126	\$2.98
12 Jumbo Prints and New Roll of Kodacolor film, 126	\$3.07
Kodacolor Neg reprints (square)	\$.14

All prices comparably low.
Price sheets and envelopes
available.



No gimmicks
No lies

47 years of continuous
service guarantees your
quality.

MARKET BASKET PHOTO CO.

P. O. Box 370, Yuma, Arizona 85364 or
P. O. Box 2830, San Diego, Calif. 92112

ART GREENE

sez —

Howdy, partner!

Come try our



Lake Powell Boating Adventures

We, the boating pioneers, offer you exploring, hunting, fishing, hiking, photography, all watersports, fantastic side canyons, together with Rainbow Bridge. Houseboating at its finest. Fish for trout, bass, crappie
One-Day Trips to Rainbow Bridge—1½ Hour Trips to Glen Canyon Dam

Lake Tours of Any Length,
From One to Five Days

Write for brochure and
information to:

CANYON TOURS, INC.
WAHWEAP LODGE & MARINA
Page, Arizona
Phone AC 602 645-2433



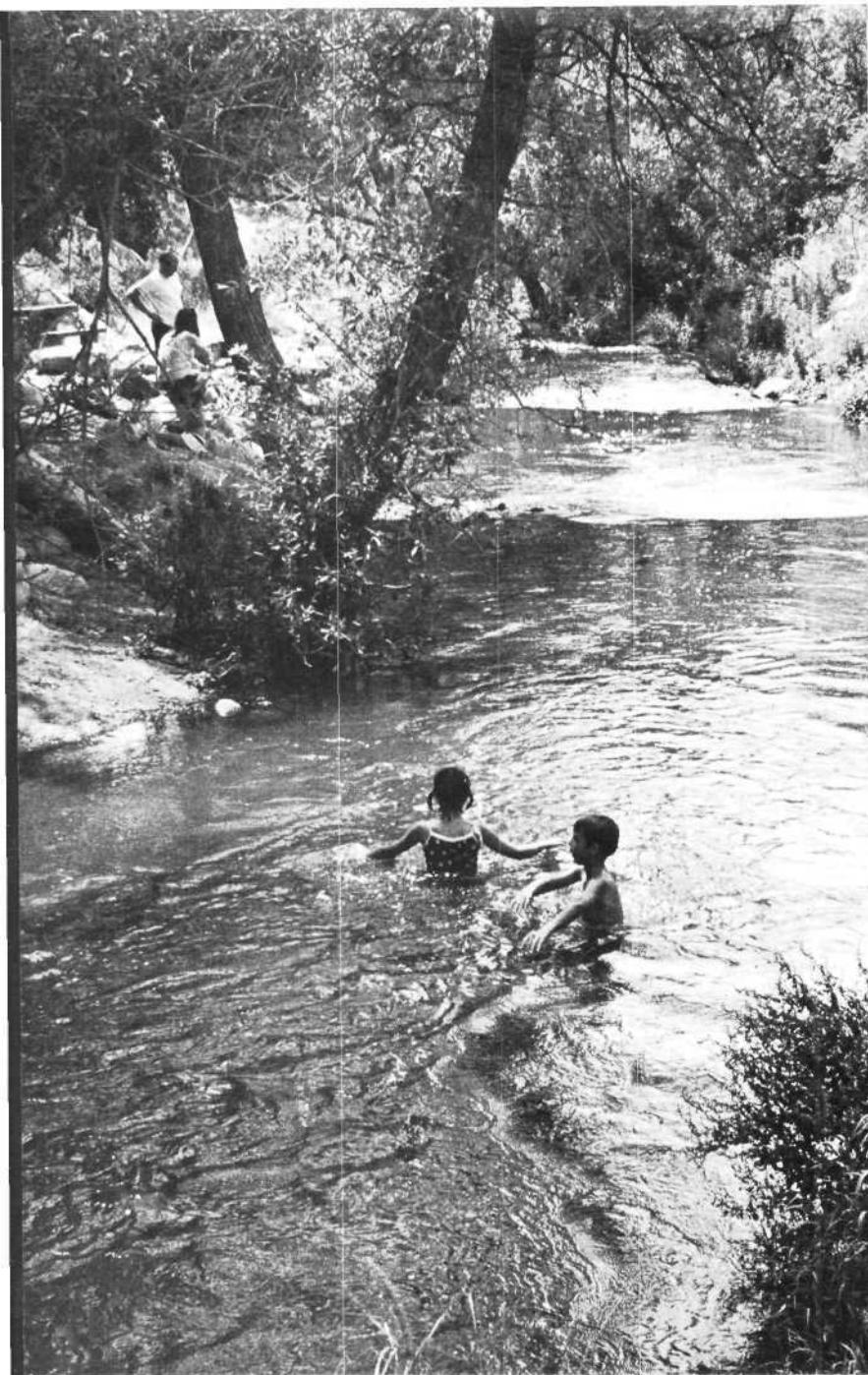
STOP THAT THIEF WITH LOCKSTRAP

A revolutionary new design secures all G.I. cans to your carrier. Attaches to rear slot. If for 4" high rear panel state if 1" slot or 1½" slot. All steel construction, bright zinc plated.
Type D Only.....\$7.50
Send for FREE Brochure Showing Other Models to Fit Any Vehicle.

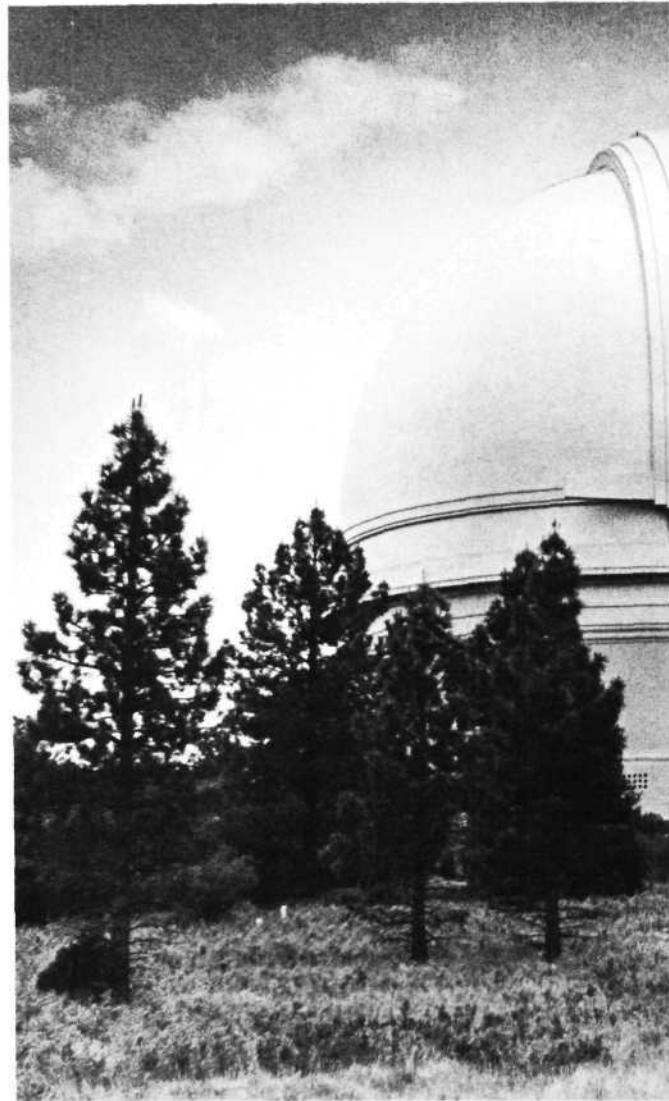
DEALER INQUIRIES INVITED.

Route 4, Box 188, Salem, Oregon 97302

The Land of



Swimming and fishing for trout in the river are favorite pastimes at the San Luis Rey River Campground of U.S. Forest Service.



There are many places of interest and excellent public and private campgrounds for vacationing families in the Palomar Mountain area of Southern California.

THE FOREST Service refers to their national forests as "The Land of Many Uses," but I like to call California's Palomar Mountain area the "Land of Many Pleasures."

On a lazy summer day you can enjoy a multitude of pleasures—from sharing

a picnic lunch with a squirrel to studying the stars at the home of the world's largest optical telescope, or enjoying a stroll through a natural garden filled with fragrant azaleas. If you are a fisherman there is a trout pond, a large lake with a variety of fish, and a scenic stream well stocked with trout.

The Palomar area offers trails to follow, cool mountain springs to sip from, wildflowers to smell and billowy white clouds to enjoy while resting at the edge of a soft mountain meadow. This lofty highland is part of the Palomar District of the Cleveland National Forest in

northern San Diego County. State 76 east from U.S. 395 to County S-6 will take you to this scenic sierra.

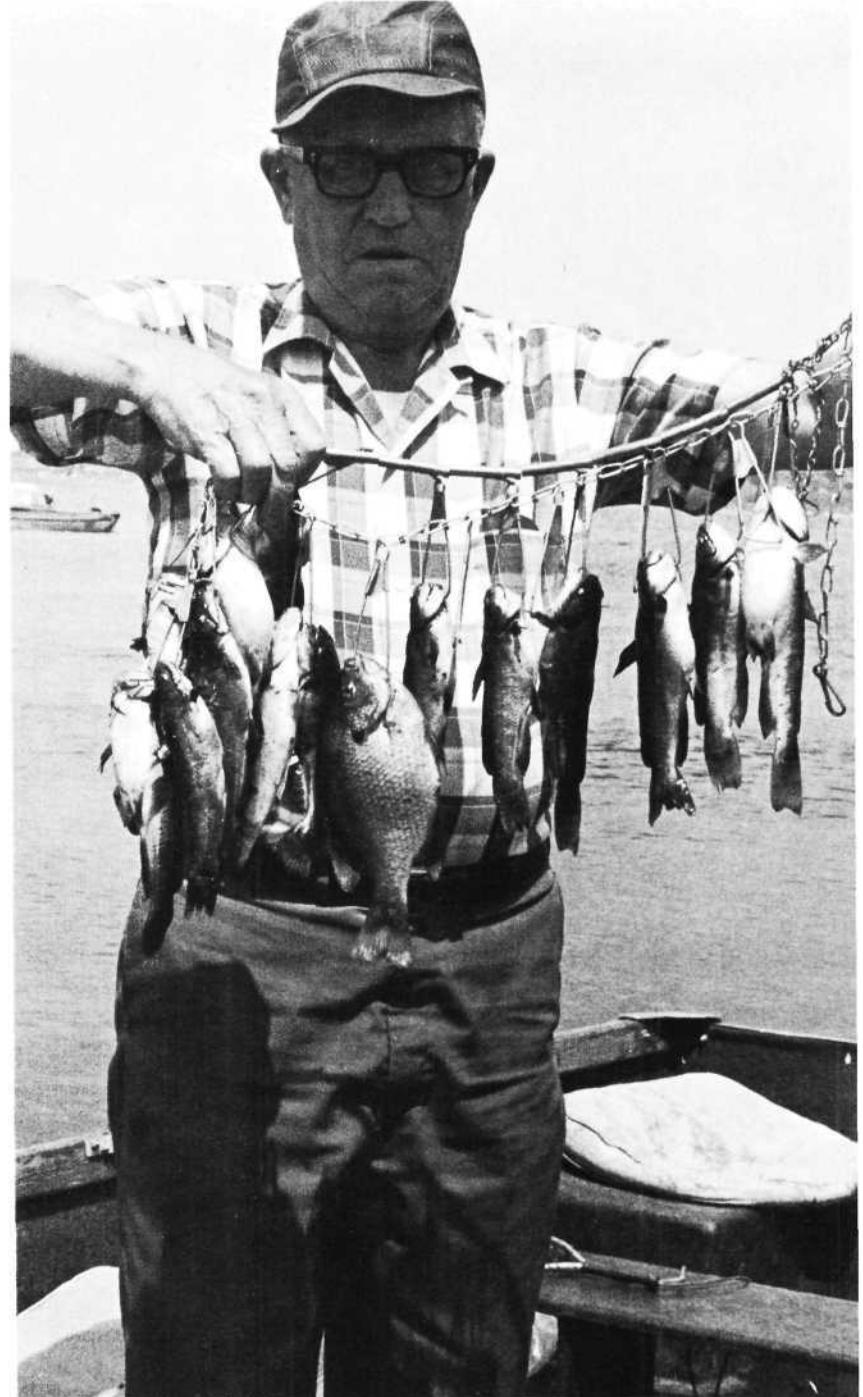
You can spend a day, a weekend, or longer on the mountain since there are facilities for picnicking, camping, and cabins available.

On the west side of the mountain is Palomar Mountain State Park, one of the finest and most scenic campgrounds in Southern California. Within the park, Doane Pond is kept stocked with scrappy little trout that eagerly respond to the fisherman's offerings.

State park rangers offer interesting

Many Pleasures

by Ernie Cowan



A fisherman displays a string of fish he caught during a day's angling at Lake Henshaw. Lake and campgrounds open all year.

campfire programs and nature walks along some of the many scenic trails during summer months. The Doane Valley nature trail is a self-guiding path with points of interest and natural landmarks marked to correspond to a printed guide available at the trailhead. This scenic trail crisscrosses Lazy Doane Creek, then opens into a big meadow and loops back to the Doane Valley Campground.

Just west of the state park on a high overlook is the State Division of Forestry's Boucher Lookout. From this view point the visitor can see forever on a clear day.

The high point of Palomar Mountain is the home of the world famous 200-inch Hale telescope. Here visitors can enjoy an educational tour through the massive silver dome. The view of earth from atop Mt. Palomar is also impressive, with pine covered hills and green meadows laying below.

In addition to the state park, the Forestry Service has two campgrounds in the Palomar area. The Observatory Campground is located in an oak-studded meadow below Palomar Observatory, and the San Luis Rey Campground offers river bank camping on the San Luis Rey River

at the base of the mountain on State 76 near Lake Henshaw. Since there are only a few units at the river camp, it usually is full, especially on summer weekends.

A new commercial campground and picnic area, called Oak Knoll, was opened at the intersection of State S6 and State 76 just as this issue of Desert Magazine was going to press.

If you are planning a trip to Palomar, you might take the scenic loop which offers the best look at the area. After taking S-6 to the mountain top and enjoying the many attractions there, take County

Continued on page 37



FUN IN PHINNEY CANYON

Text and color photo by Sam Petty

The Phinney Canyon road becomes a little more difficult near the crest, but those reaching the top have a spectacular view of Death Valley and the High Sierras.

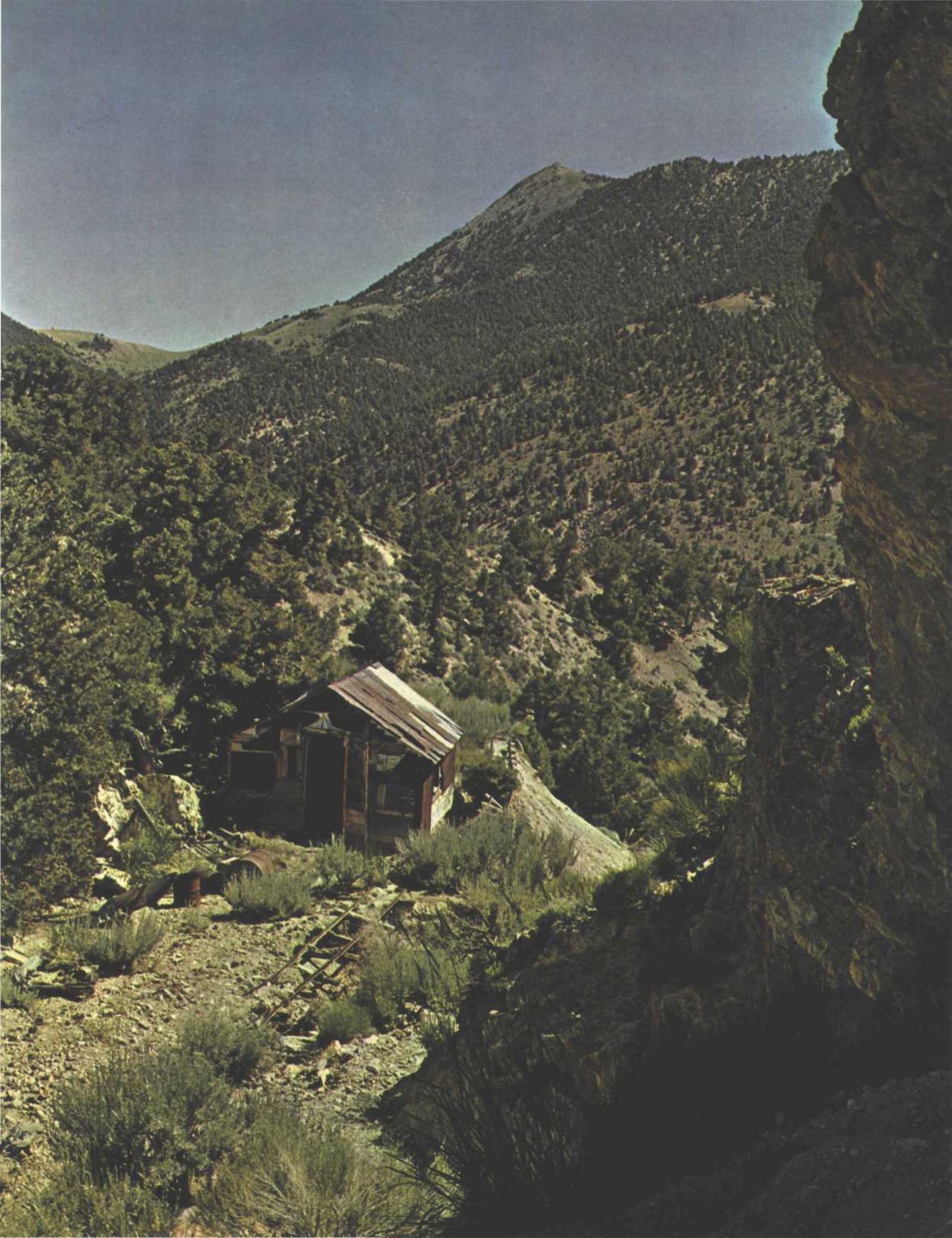


N THE HEAT of the summer, one of my greatest pleasures is searching for seldom-traveled roads which leave the desert floor and reach into the cooler mountain elevations. Most of these attempts raise false hopes. Many well-meaning ruts snake up an alluvial fan and dip into a canyon mouth, only to come to a disappointing halt.

Happily, diligence is eventually rewarded with the discovery of a road that never quite gives up the ghost, but keeps climbing between canyon walls, from one near washout to the next.

The road up Phinney Canyon is one of these, climbing from the flat expanse of Sarcobatus Flat to the 7600-foot crest of the Grapevine Mountains in the northeast corner of Death Valley National Monument. Since this road is approached from the Nevada side of Death Valley few visitors come here, and the canyon still appears just as the miners must have left it.

Phinney Canyon is reached by taking U.S. 95 north from Beatty, Nevada. After 11.5 miles, take the well-traveled dirt road to Sarcobatus Flat which angles

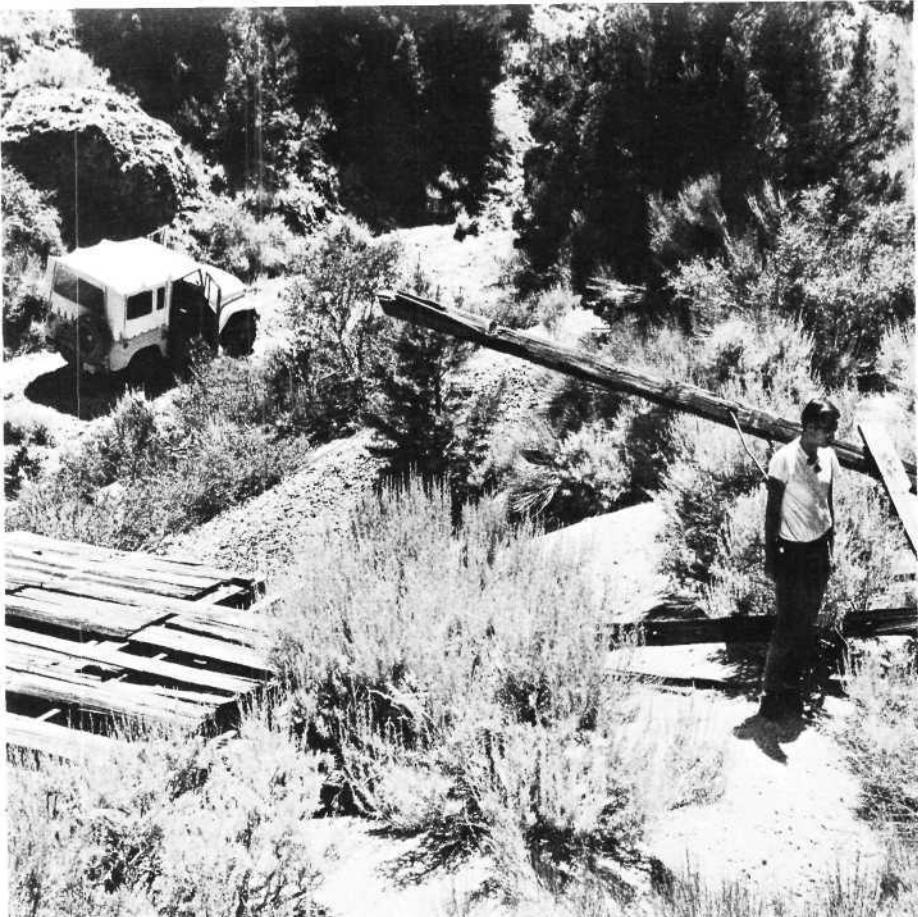


off to the left. Sarcobatus Flat is a vast desert plain ringed by mountains on three sides. The uninterrupted miles of uniformly spaced sagebrush found here make a beautiful sight for the desert traveler who appreciates open expanse still undisturbed by civilization.

As the road passes eastward across Sarcobatus Flat, the mouth of Phinney Canyon can be seen slightly to the right. From now on, you will be in Death Valley National Monument, so be sure to bring your own fuel for cooking and warmth.

Seventeen miles from the highway, the road dips into the canyon wash and starts climbing into a green forest of pinon pine and juniper. Unless conditions have changed, owners of two-wheel-drive vehicles will have to do shovel work at occasional washouts if they are to proceed further up the canyon (an absolute must!).

Three miles after entering the canyon, a road branches to the right and stops after only thirty yards. The Phinney Mine is a half-mile hike further up this narrow side canyon. The small cabin here was in fairly good condition; the rats and the rain having accomplished the majority of damage thus far. The old newspapers inside dating from the 1920s and 30s made great reading. We



took pictures of some of them with the 35mm camera and tripod, leaving the originals undisturbed for future visitors.

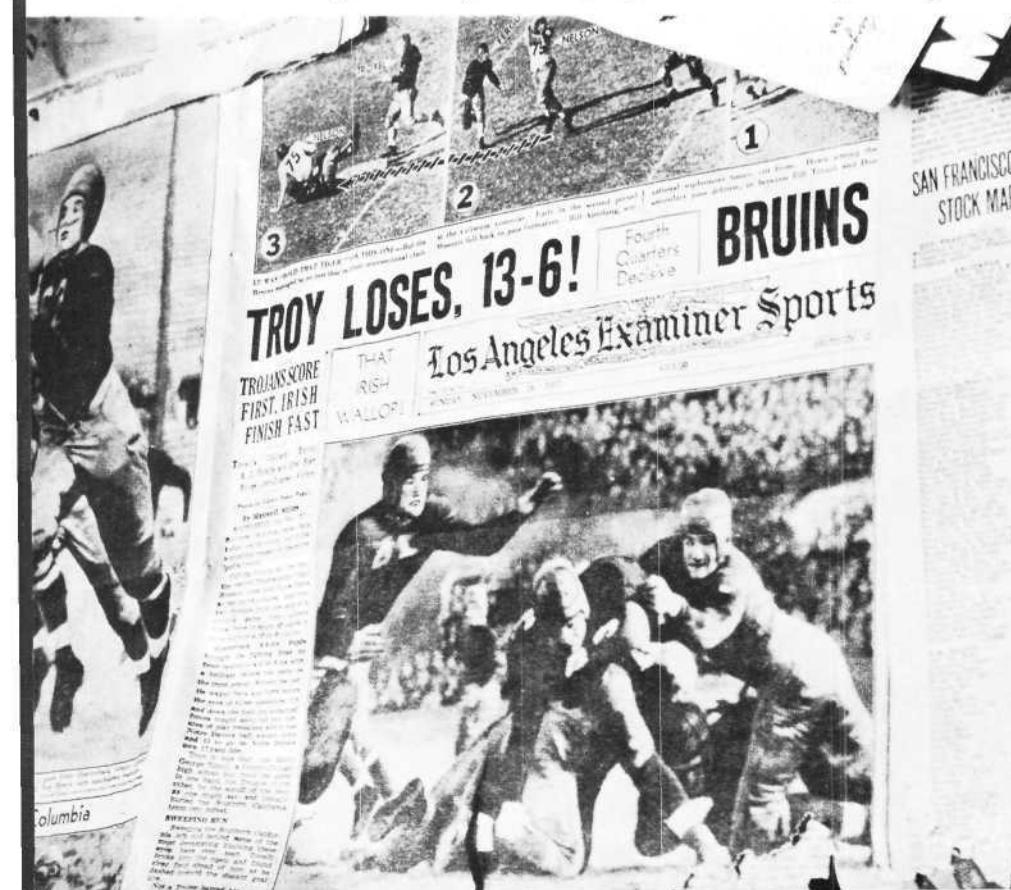
Two tunnels, complete with an ore car and tracks, are behind the cabin and a water pipe can be followed to a small spring which was running a steady trickle

Vertical mine shaft (above) is one of many in rugged area. Part of the wallpaper of a miner's shack was the November 28, 1937 issue of the Los Angeles Times. All black and white photos by Dick Wetzel.

of good water a year ago. The cabin was undermined by heavy rains of early 1969 and was in imminent danger of falling to the canyon bottom when we were there. Don't build cabins on tailing piles!

Continuing up the main canyon, a mine shaft can be found at the right side of the road. Here the road becomes difficult for 4-wheel-drive vehicles but continued effort will be rewarded when reaching the crest and the floor of Death Valley comes into view. The road disappears here but you will want to continue on foot to see Doe Spring, a small water seep located a short walk west of the road's end.

Nothing could be better during a hot summer weekend than making camp among the trees and granite cliffs of Phinney Canyon, and looking down on shimmering Sarcobatus Flat and the Nevada desert beyond. If you should try it in winter, be prepared for cold weather—and who knows, there is always that chance of snow! □



PALA

IN THE verdant valley of Pala just off the highway between Riverside and San Diego, California, is an Indian mission and school that refused to die. The story of Mission San Antonio de Pala is one of compassionate Franciscan priests, friendly Indians and the changing attitude of white men.

Despite floods, earthquakes, wars and greedy gringos, this comparatively small mission has survived for 156 years and today is the center of the social and spiritual activities of all of the residents of the community.

Its doors are also open to visitors and travelers who find relaxation under the cool trees in the picnic area in front of the mission and solace in visiting the chapel. Only six miles from the speeding traffic on U. S. 395, the secluded valley of Pala has remained virtually unchanged.

The possibility of establishing a mission in the area was first recorded by Father Juan Mariner in his diary in 1795:

"In the afternoon before sunset we passed a *rancheria* which is called *Pale*." (*Pale* is Indian for water.) "It has a great deal of running water which can easily be taken out. It also has very much good soil . . . there is a level plot on which to place the mission. There is an unlimited amount of good timber, plenty of stones, firewood and good pasture land. It also has five *rancherias* that speak the language of San Juan Capistrano."

Despite Father Mariner's glowing report, it was decided to establish the Mission San Luis Rey de Francia near Oceanside in 1798 as the first of the inland missions of California, and Pala was designated as an *asistencia*, or a subsidiary to the "Mother Mission" of San Luis Rey.

A granary was built at Pala in 1810 and other buildings soon followed with the chapel opened on June 13, 1816 by Padre Antonio Peyri, who, although in

by
**Jack
Pepper**

*Original bell
in the Mission
campanile has been
summoning the
faithful for
156 years.*



charge of the San Luis Rey Mission, personally directed work at Pala.

A sister *asistencia* of Pala was built at Las Flores but fell into ruin and neglect within 35 years. Unlike Las Flores, Pala refused to die and has served Indians and white man continuously for 156 years. But they were not all peaceful years.

The Franciscan fathers soon discovered the Pala Indians—which are of the Shoshonean group—were of a "superior" level of the aboriginal culture and were intelligent, peaceful and made beautiful baskets, pottery and stone implements and were quick to learn the arts of the white man. Also, their religion included the idea of a Supreme Being, *Chimigchinch*, so the transition from their religion to Christianity was not difficult.

Working together, the missionaries and Indians made thousands of adobe bricks, hauled lumber down from Palomar Mountain and started building. By 1820 they had built a quadrangle mission site covering more than 25,000 square feet with living quarters for the fathers, dormitories, classrooms, shops and granaries, plus an aqueduct for water. Although still called an *asistencia*, by this

time, Pala was actually a full-fledged mission.

For a dozen years the Pala Indians worked on their mission, built adobe homes to replace their former reed huts and decorated the chapel, while making pottery and baskets. They were unaware of the conflict between the Catholic Church and the Mexican government which ended with the secularization of the missions in 1834.

The end came on August 22, 1835 when the Franciscans surrendered the Mission of San Luis Rey and all its properties to Pio Pico, the Mexican official. By 1846, the Franciscans were forced to abandon all of their California missions, with the exception of Santa Barbara, opening the way for exploitation by Mexican rancheros and the newly arrived white settlers.

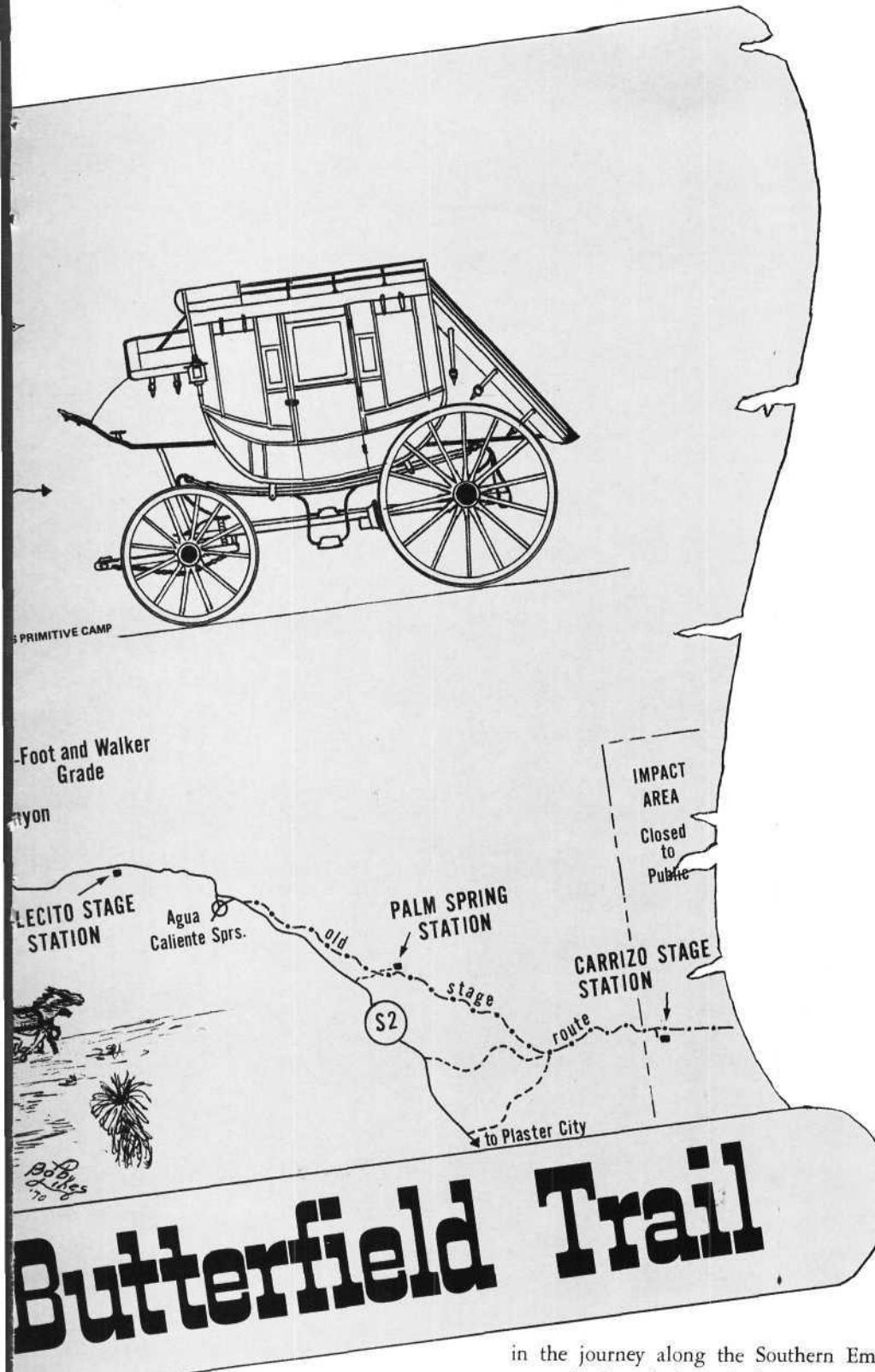
Many of the Pala mission buildings fell into disrepair, but the Indians kept the chapel open for worship, despite the fact there was not a priest in residence. The Reverend Jose Mut, of the Mission San Juan Capistrano is said to have walked barefooted to Pala where he bap-

Continued on page 38



by Robert C. Likes

The Southern Emigrant Trail—later called the Butterfield Overland Stage Route—stretched from St. Louis, Missouri to San Francisco. Probably the deadliest section of the trail was through the desert areas of Southern California.



GREAT TROUGH in the Anza-Borrego desert area of San Diego County winds through the desolate Carrizo and Vallecito Valleys and then rises into the cool, green coastal hills of Southern California. This natural passageway is the legendary Carrizo Corridor.

Along its course of rutted and sandy washes flowed a steady stream of California history, for this was the last leg

in the journey along the Southern Emigrant Trail and the colorful Butterfield Overland Stage Route.

Kit Carson passed this way in 1846, guiding General Stephen Watts Kearny and his dragoons through the corridor when it was nothing more than a wilderness between waterholes. One year later, Colonel St. George Cooke and his Mormon Battalion followed Kearny's route and established the first wagon road into Southern California. This wagon road became known as Cookes Road, or



Sonora Road, until the discovery of gold brought a flood of Americans westward in 1849. From this date on, it was called the Southern Emigrant Trail.

In 1850, great herds of sheep and cattle were driven across the old trail to feed the exploding population on the west coast. Because thousands of animals perished and left a trail of bleaching bones from Yuma to the Carrizo Corridor, the Southern Emigrant Trail was called the *Jornada del Muerto* — Journey of Death.

By 1856, the United States Government realized it had a growing communication problem with this far-flung empire on the Pacific coast. A mail contract linking San Antonio with San Diego was awarded in 1857. The first mail crossing the Colorado Desert and through the Carrizo Corridor on mule back was known as the "Jackass Mail."

A second and larger contract was awarded to John Butterfield in 1858.

The first mail pouches were loaded aboard the departing Butterfield Stage in St. Louis, Missouri, and in exactly 23 days, 23 hours and 30 minutes, the mail pouches were safely delivered in San Francisco, California, more than 2800 miles away.

Exploring the Butterfield Overland Trail from the vanished Carrizo Springs Station to the old Warner Adobe reveals the least spoiled section of its entire route in California. Although this section was the gateway to the promised land, it is doubtful that the traveler looked forward to making the passage. With its annual rainfall of something less than five inches, this lonely land supports only an arid growth of ocotillo,

Carrizo Springs. This section of the old trail crosses a Navy bombing range and special permission is required before entry. The stage station at Carrizo Springs has completely vanished.

After leaving Carrizo Springs, the old stage road followed the Carrizo Wash east until it reached the junction of the Vallecito Wash. Turning up the Vallecito Wash, the trail plowed through the sand to a point nine miles from the Carrizo station where it left the wash to reach Palm Spring, a short distance away. The first native palms, *Washingtonia filifera*, seen in California by a non-Indian were the ones at Palm Spring. Pedro Fages first described the palms in 1772. Sixty-five years later,



cholla and indigo brush, though there are stands of smoke trees and mesquite in the washes. In 1847, Colonel Cooke described the eroded hills and rocky slopes as ". . . the worst 15 miles of road since we left the Rio Grande." When the Overland Stage established a route through the corridor, it was the epic battle of man against the elements, with a succession of Indian raids, hold-ups and accidents thrown in just to make it interesting.

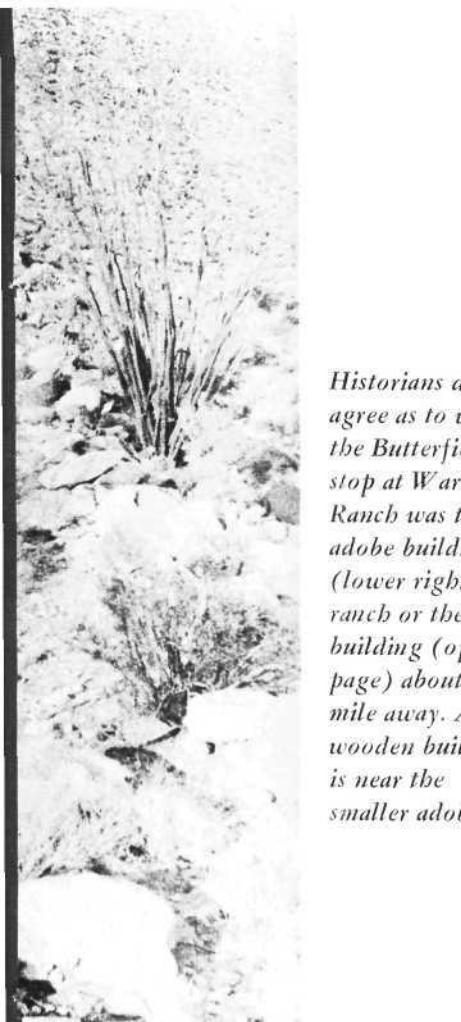
The Carrizo Gap, through which the Carrizo Wash passes, is the eastern entrance to the Carrizo Corridor. Following this route, the Butterfield Overland Stage located the first way-station at

Colonel Cooke reported a clump of 20 to 30 palms at the spring, but by 1853, after a steady stream of gold seekers, the number of palms had dropped to three or four.

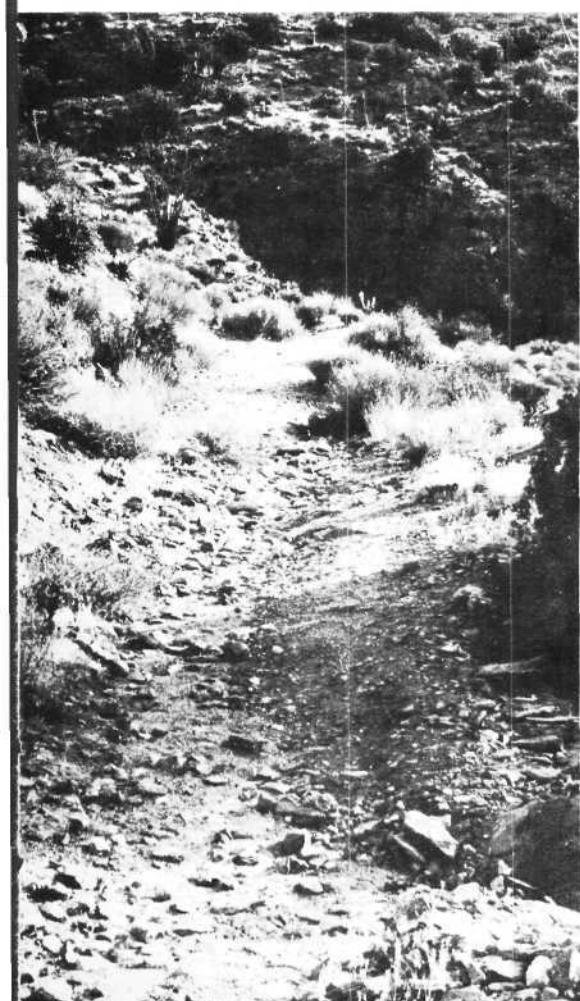
When the Butterfield line built an animal changing station at the spring in 1858, the majestic grove of palms had been reduced to a few burnt stumps. Today the site of the Palm Spring station is marked by a monument standing in a clump of green mesquite, and three small palms. The spring still provides water at this small oasis, and the serenity is in marked contrast to the flurry of activity that took place when this was a vital oasis along the Butterfield Trail.



Traces of the
Old Southern
Emigrant Trail
(above and below)
can be seen along
present-day California
State Route S2 in
San Diego County.
One of the best
views is at Box
Canyon rest stop
where the trail can
be seen from a
lookout platform.



Historians do not agree as to whether the Butterfield Stage stop at Warner's Ranch was the large adobe building (lower right) on the ranch or the smaller building (opposite page) about a mile away. Another wooden building is near the smaller adobe.



After leaving Palm Spring, the old road continued following the shifting sands of the Vallecito Wash until it reached one of the most famous way stations along the route. Vallecito was the first oasis with an abundance of water and green grass, providing welcome relief for the weary passengers after days of exposure to the heat and glare of the desert.

W. L. Ormsby, a passenger in 1858, commented, ". . . a perfect oasis," then went on to say, ". . . a most refreshing relief from the sandy sameness of the desert." The Vallecito station was originally constructed of sod-bricks with a roof of hand-hewn beams, pegged and tied in place with rawhide, then covered

Using the coach for cover, Ol' Bill and his armed passengers continued to hold off the bandits, forcing them to retreat. After another volley of gunfire, the bandits rode off into the night. Soldiers who had been stationed at Vallecito and who had heard the shooting, came riding up just as Bill was cutting the dead animal out of the harness. After a brief exchange of words, the soldiers rode off in pursuit of the outlaws and Bill headed the stage toward Vallecito, feeling sure the bandits would be caught.

The next morning, Ol' Bill was astonished to see there were no prisoners. When questioned about this, the corporal in charge of the detail of soldiers smiled, and then replied, "Well, let's



with willow poles and tules before a final topping of sod. The famous station was reconstructed in 1934, and today it is a San Diego County Park.

Many colorful stories centered around the Vallecito stage station. One such account was the night "Ol' Bill," one of the drivers, was held up a few miles south of the station. Five men on horseback engaged in a running gun battle with the passengers on the stage as Ol' Bill had his team going "hell-bent-for-leather." Just when it looked as though the stage might reach the safety of the Vallecito station, one of the animals on the team was shot and the stage came to a terrifying halt.

look at it this way, Bill. Vallecito has no accommodations for prisoners—outside of the graveyard, that is."

From Vallecito, the road went west, gradually gaining elevation until it reached the upper end of Vallecito Valley, where it turned and entered a narrow canyon. This was the only passageway between Vallecito and San Felipe Valleys, and it was here that Colonel Cooke and his men were almost defeated in their attempt to blaze a wagon road into Southern California.

"I came to the canyon and found it much worse than I had been led to expect," Cooke later reported, ". . . there are many rocks to surmount, but the

worst is the narrow pass." All of their road building tools had been lost when the party forged the Gila River in Arizona, so axes were used to increase the opening. Even then, the chasm was too narrow by a foot of solid rock, and Cooke ordered the wagons to be taken apart and carried through. It required two days for the men to work their way out of the canyon. The pass was widened for the Butterfield run, and was known as Cookes Pass or Devils Canyon.

For some unexplainable reason, the pass now bears the name of Box Canyon, and for obvious reasons, it is by-passed by the paved highway. There is a histori-

the ridge became known as Foot and Walker Grade. Upon reaching the summit, the course ahead became routine and allowed the coach and exhausted passengers to move swiftly through the lower reaches of the San Felipe Valley. The next stop was the San Felipe Station. The site is located on private property just north and a little west of Scissors Crossing.

The next 16 miles of the pioneer trail continued north through the increasingly fertile San Felipe Valley and crossed another pass before it dropped down between the rolling hills surrounding the station at Warner's.

north of Wilson's store, and equidistant between the San Felipe Station to the south, and the Oak Grove Station to the north. However, both the Wilson store and the Warner adobe are historic landmarks, and worth the time to visit.

At Warner's the trail branched, one heading southwest to San Diego by way of Santa Ysabel; the other pressed on in a northwest direction across the small valley and through the hills until it reached the Oak Grove Station ten miles away. The store at Oak Grove utilized the foundation and ancient walls of the original Butterfield Station. From here the stage route generally followed what is now State 79 until it reached Temecula, with a stop between at Aguanga.

With the termination of the Butterfield Overland route in 1861, the decline of the Southern Emigrant Trail began. More northerly routes were being discovered and used, particularly the Cajon and San Gorgonio passes. New routes were being used from San Diego to Yuma via Campo and Jacumba, and even the discovery of gold in the mountains west of the old trail in 1870 did little to revive its use.

In the early 1900s, the pioneer trail through the Carrizo Corridor lay almost forgotten. It was simply a road that "began nowhere, and ended nowhere"—a sad epitaph compared to the address Colonel Cooke gave his men upon completion of their assigned task.

"History may search in vain for an equal march of infantry," he said. "We have dug deep wells which the future traveler will enjoy . . . we have worked our way over mountains . . . hewed a passage through a chasm of living rock more narrow than our wagons . . . and thus marching half naked and half fed, and living upon wild animals, we have discovered and made a road of great value to our country."

Much of this famous route lies within the boundaries of the Anza-Borrego Desert State Park, and so the areas of historic interest are preserved for present and future generations to see and appreciate. □

Creek bed through Box Canyon was part of the Butterfield Stage Route. Photo by David Muench, Santa Barbara, California.



The historic Vallecito stage stop offered palm trees and water for the weary passengers. It is now restored as a San Diego County landmark and camping area.

cal marker here, and a parking area from which you can look down into this famous pass. However, a far more rewarding experience is to climb down into the narrow defile and view it from the same perspective that confronted Cooke in 1847.

Box Canyon was the end of the Carrizo Corridor and the old stage route became easier as the team of horses followed the rutted ribbon into more open country. After crossing a dry lake bed, the trail led straight up a rocky ridge with a grade so steep passengers had to get out and either walk up or push the coaches up the incline. Because of this,

The historical marker at the old Wilson Store proclaims it to be the Butterfield Overland stage station, yet, according to historian William Wright, this structure had not yet been built when the Butterfield Stage discontinued operations in 1861. Wright claims the Wilson Store was one of two buildings constructed in 1863 at a spot known as Kimbleville. He acknowledges the Wilson store was later used as a stage stop, but not for the Butterfield line. Instead, Wright says the old Warner adobe, built in 1849, is the real Butterfield stage station. The Warner adobe is located one and a half miles



TRACKING THE



FINDING REMNANTS of prior life is always fascinating—whether it is a candle mold of the last century, or a fossil of another geologic era. To find an antique of the 1800s, one need only visit an antique shop. To find a fossil millions of years old is another story. Usually much leg work is needed to find the exact formation and then hours may be spent digging to find even a fragment of prehistoric life.

At the Wheeler Amphitheatre in western Millard County, Utah, it is different. Fossil trilobites are everywhere—in the rain-washed gullies, among the piles of cardboard-thin Wheeler Shale, and hidden in the gray limestone walls of the Marjum formation that surround the bowl-shaped area.

This desolate spot, just east of Antelope Springs in the House Range, is well known to paleontologists and rock hounds around the world for the abundance and variety of trilobite fossils. Because of the arid desert climate the soft shale erodes slowly, leaving complete trilobites weathered free from the matrix. In most climates the nonresistant shale would be completely eroded in short time.

Trilobites are an extinct form of sea life that inhabited the oceans 500 million years ago. At that time, much of North America was covered by warm shallow seas. Approximately 20 different trilobite species are known from western Utah's Wheeler Shale. Trilobites found there



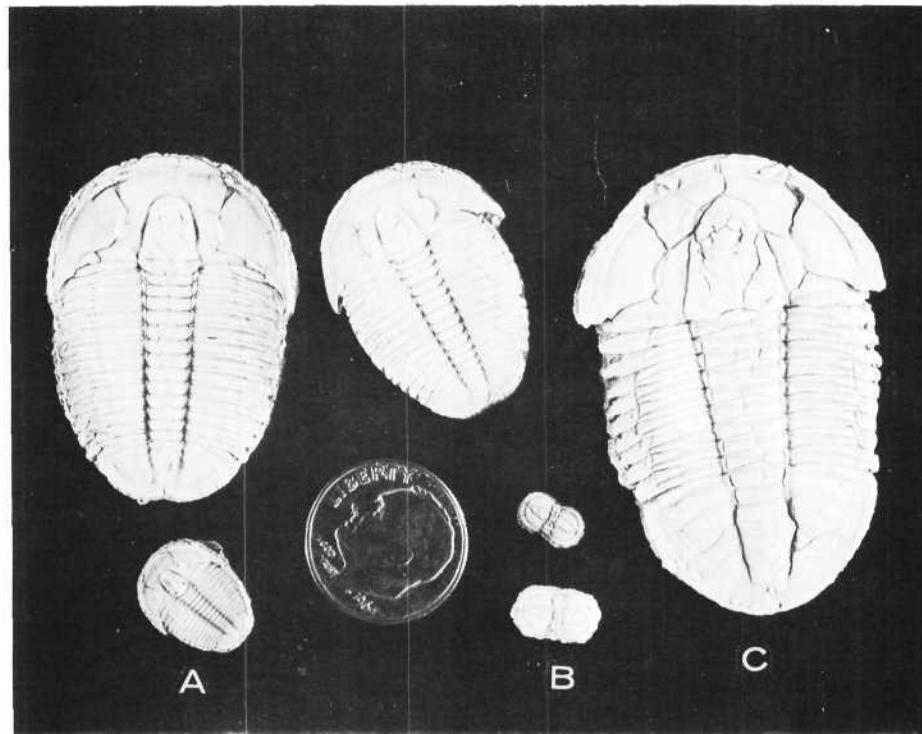
Shale layers are pried apart (above) with a chisel in search of trilobites. A handful of the fossils, millions of years old, (right) were found within only a few minutes in the Utah hunting grounds.

range in size from microscopic juveniles to an occasional four-inch adult.

Collecting trilobites from Utah's Antelope Springs area is great sport for all the family. Those who want to take it easy can drive to the area, sit on a mound of shale, and find enough trilobites to keep them busy all afternoon without moving more than a few feet in any direction. Members who enjoy climbing can chip trilobites from the limestone ledges and cliffs that surround the area. Hikers may be spurred on by knowing that eight-inch trilobites in the Smith-



TRILOBITES



Common trilobites found at the Utah Wheeler Amphitheater are: A. *Elrathia kingii*; B. *Peronopsis interstricta*; C. *Asaphiscus wheeleri*. Although most are the size of a coin, some measuring eight inches have been found.

sonian Institution were collected from the rocky slopes to the east at the turn of the century.

If you decide to try your luck collecting the supreme creation of the Cambrian Period, take plenty of water and food. It is about 40 miles to the nearest town—Baker, Nevada, to the west and Delta, Utah, to the east.

The route to Antelope Springs is clearly marked on Utah highway maps. The gravel roads that lead from U.S. 6-50 to the fossil area are in good condition except when it rains. Then beware. Gravity carries the rain streams across low spots in the road, cutting foot-deep gullies in a matter of minutes.

The locale of the original Antelope Springs is easy to spot. Two huge dead Lombardy Poplar trees rise from the site. A pipe now carries the water to a reservoir on the east side of the range. The most popular collecting area is

by
Joleen
Robison

about 200 yards east of the original spring. Black circles pock the ground on the west rim of the bowl-shape amphitheatre where past visitors have built campfires. It seems that someone is always at the area collecting fossils.

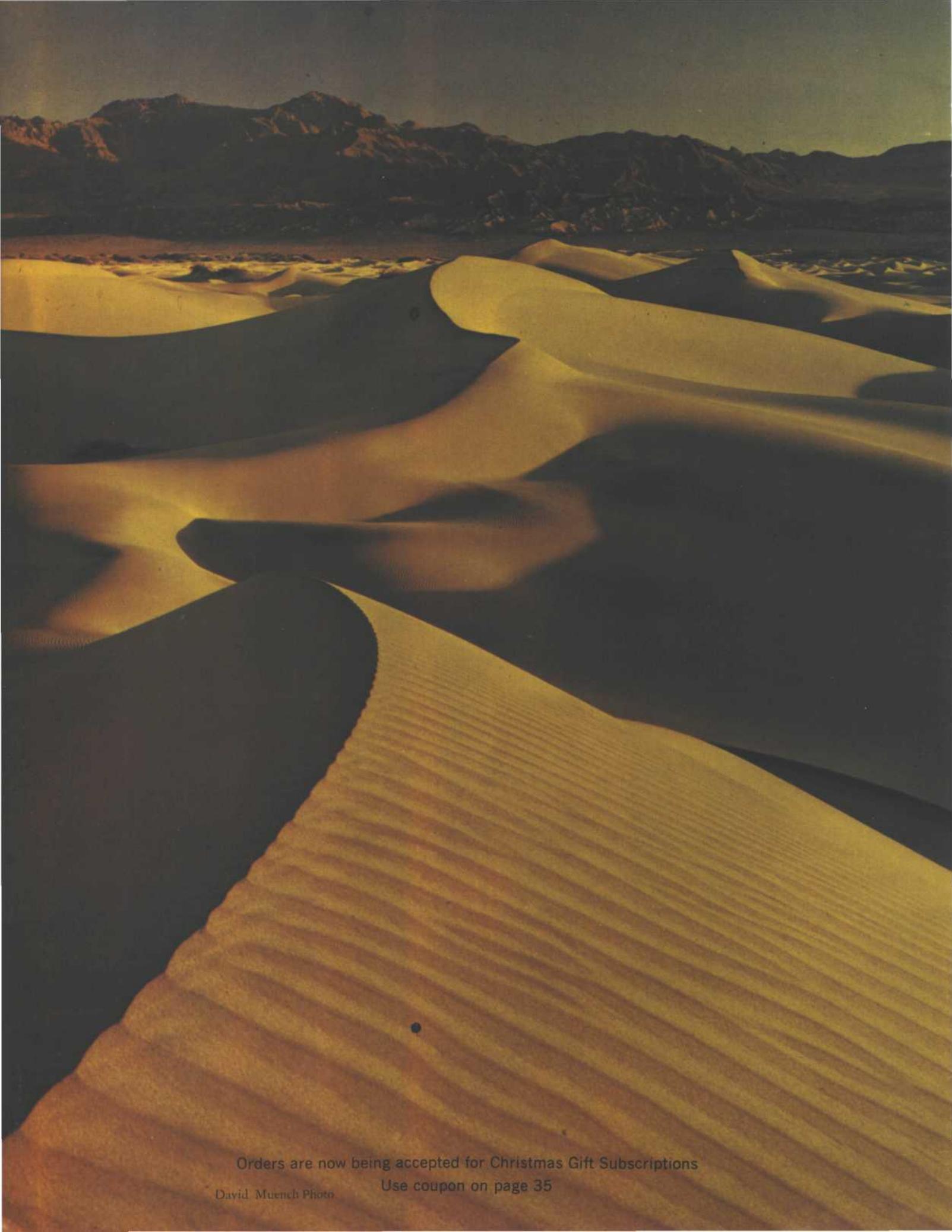
Probably the first men to collect trilobites here were Indians. The *Pachavée* (Ute for little water bug) was worn for magical protection. A hole was bored in the head of the trilobite and it was strung and worn around the neck as an amulet. In the early 1900s Indians still traveled long distances to obtain a *Pachavée*.

It may take a few minutes to find the first fossil—but soon they can be spotted everywhere. The most common trilobite species found in the Wheeler Shale is *Elrathia kingii*. It ranges up to two inches in length and has a prominent head with two crescent-shaped eyes, a thorax of 13 segments, and a small tail. Another common trilobite is the tiny dumbbell-shaped *Peronopsis interstricta*, which has a head and tail of equal size and only two segments in its thorax. Brachiopods, mollusca, sponges, and less common trilobites also occur in the shale.

Trilobite (pronounced try-low-bit) means three lobed. The name refers to the longitudinal body units rather than to the head, thorax and tail. Trilobites belong to the diversified Arthropoda phylum that includes modern-day lobsters, spiders, insects, and centipedes.

Only the calcified parts of the trilobites are found in the Wheeler Shale, but in





Orders are now being accepted for Christmas Gift Subscriptions

David Muench Photo

Use coupon on page 35



In the steep walls of Marjum Canyon, a few miles from the fossil area, is a well-preserved former abode of a hermit—who served a raisin brew during Prohibition.

British Columbia trilobites have been preserved with soft appendages extending beyond the margins of the exoskeleton. Paleontologists surmise that most of these primitive creatures used their appendages to walk on the sea floor or to swim short distances. A few species were probably planktonic or free-floating forms that drifted at the surface. Lack of teeth or other biting mouth parts indicate that trilobites fed by filtering or sifting minute organic particles.

The planktonic trilobites were transported long distances by ocean currents. A few of the western Utah trilobite species have been identified in Newfoundland, Australia, Russia and Sweden.

While you are in the House Range you may wish to visit an abandoned hermit's home in Marjum Canyon, about ten miles to the south-southwest of Antelope Springs. The dwelling is situated at the end of a short road leading north into the first side-canyon above the mouth of Marjum Canyon. The path that leads between the high canyon walls to his abode was well-worn during prohibition days, for the old hermit furnished imbibers with a special raisin-flavored brew from

his still that was hidden in the rugged terrain beyond his home.

The old man built his home in a natural cave etched in the steep canyon wall. He bricked the entrance with tightly fitted stones, leaving two small windows and a door. Inside a concrete floor was poured and niches were chiseled in the cave walls to hold wooden shelves.

The stove is a monument to its creator's ingenuity. A metal barrel, pipe and tin cans have been magnificently fitted to make a heating and cooking contraption. The stove and shelves are the only furnishings left in the cave.

Utah's House Range lies on the northwest side of the Sevier Desert. Like all deserts, it has an appeal all its own. Lizards, badgers and rabbits scurry out of sight as your feet crunch the brittle shale. Twisted bleached tree skeletons writh in the sun. And hungry insects gorge themselves inside tissue-like cacti blossoms.

If you are tired of freeways, neon signs and TV, maybe you should take a break and come collect trilobites in western Utah. Wouldn't you love to own a genuine 500-million-year-old antique? □

FIND BURIED TREASURE



29.95

MK IV
no meter
POST PAID

1971 MODELS

GUARANTEED
FOR 60 DAYS EQUAL
\$200 DETECTORS OR YOUR
MONEY BACK
DEALER INQUIRIES INVITED

Finds Coins...Jewelry...Gold...Silver...Copper

Complete with 5 transistors, general purpose 5" search head, separate thumbwheel tuner and volume control, 2 1/4" internal speaker 16-30" telescoping rod, 9V battery, earphone 3" & 10" search heads also available. To Order, send cash, check or MO, \$3 deposit for COD. In NJ add 5% State Tax. Put coupon and return address in envelope. Mail to:

Treasure House DAOB Tennent, N.J. 07763
 3" Head for shallow coins 0-9"..... \$ 8.95
 10" Head for deep chests 4-72" \$10.95
 Mark IV complete no meter \$29.95
 Meter Master complete with meter \$39.95
 FREE \$14.95 Value fitted Attache Case plus
196pg Treasure Book with any 3 items above
 FREE list of Maps, Books and Catalog

MOVING?

SO YOU WILL NOT MISS AN ISSUE
NOTIFY US AS SOON AS POSSIBLE.

Be sure to include old address
as well as the new
AND BOTH ZIP CODES!

FREE

Gigantic Gem Maker's CATALOG

From the manufacturer of the world's largest selection of gem making equipment. Over 200 wanted items you can purchase from your favorite dealer. Write

Covington
SINCE 1848
Box 35, REDLANDS, CALIF. 92373

AURORA PROSPECTOR SUPPLY

OFFERS THE FOLLOWING FAMOUS
DETECTORS

WHITE'S

ALSO AVAILABLE

RAYSCOPE

KEENE DREDGES

PRECISION

SLUICE BOXES

METROTECH

DRY WASHERS

GOLDAK

TOPO MAPS

FISHER

GOLD PANS

DETECTRON

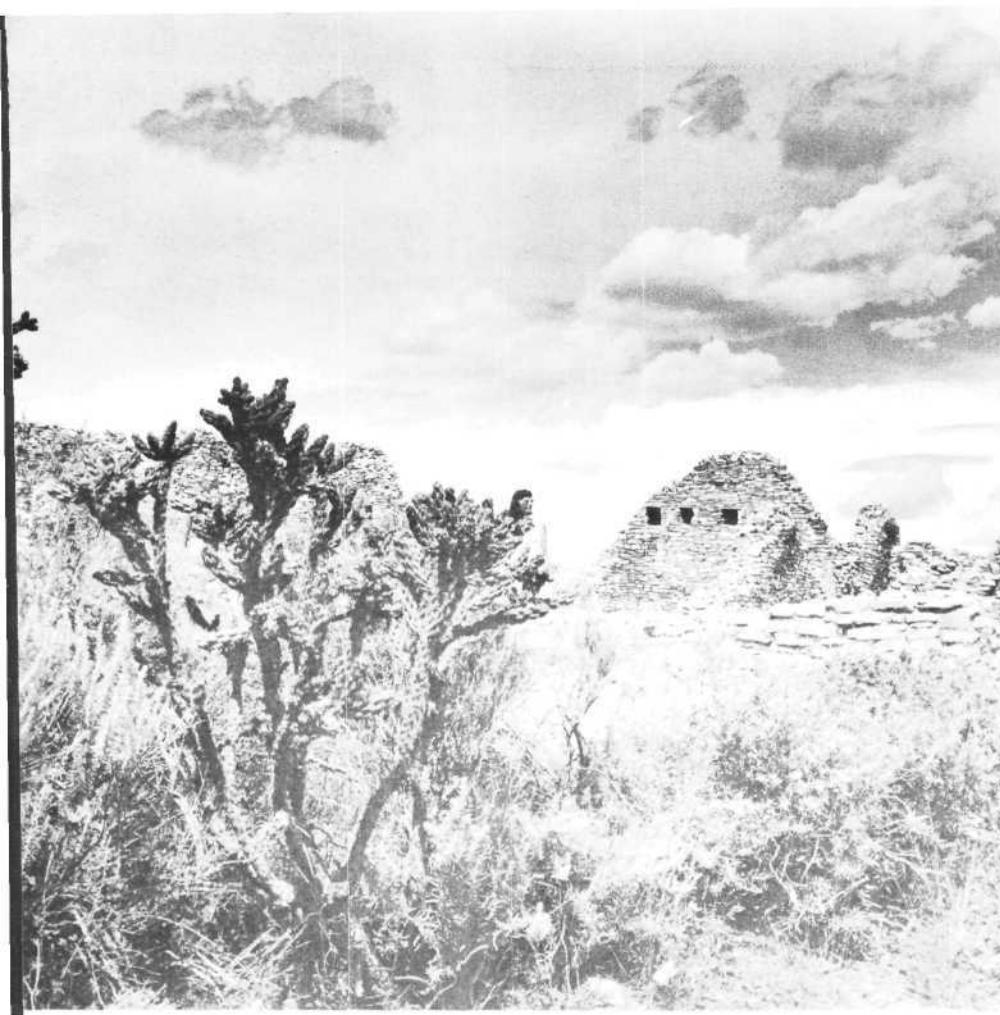
AND OTHER

RELATED EQUIP.

6286 BEACH BLVD.

BUENA PARK, CALIF. 90620

(714) 521-6321



The old church was dedicated to San Isidro by Father Letrado in 1629. Ruins of burial ground and courtyard are near church. Letrado was murdered in 1632.

ON TOP of Chupadera Mesa, in the heart of New Mexico, a twenty-minute hike takes one back eleven centuries—to the time of Charlemagne.

Gran Quivira National Monument encompasses 611 history-rich acres. Its location, 26 miles south of Mountainair, places it somewhat "off-the-beaten-path" but since its establishment in 1909, the monument has continued to attract a steady stream of visitors. They come to examine the archeological and historical exhibits in the visitor center's museum and to picnic among the pinyons, enjoying the invigorating air at 6620 feet. But, mainly, they come to stroll the well-marked Mission Trail among restored reminders of three distinct long-ago cultures. To stroll, and to study, and to wonder—what would it have been like to have lived here then?

A resident of Gran Quivira's semi-arid region around 800 A.D. would have belonged to the Mogollon (Mug-ee-yown) Indian group whose culture dates back to 400 A.D. He would have lived in a pit-house and eaten wild game and wild

plants from undecorated brown pottery. His village contained two or three families. These Ninth Century dwellings are evidence of the earliest known inhabitants of the area which is now Gran Quivira National Monument.

Before Columbus left Spain for the New World, there'd been some changes made on the mesa. A Fourteenth Century Mogollon would have been influenced by the Pueblo peoples to the west and north. His home might be a community house of gray-blue limestone from the ridge. He raised corn, squash, and beans. He gathered saltbush seeds, cholla pods, prickly pear cactus, and yucca flowers, stalks, seeds and roots. He hunted deer, pronghorn, quail, rabbits, and rats. With the Plains Apache, he traded corn for bison hides and meat.

Artistic and inventive, as well as practical, the Mogollon of that era cooked his food in sturdy pots, decorated with coils of clay. He ate from pottery that was gray-with-black, or maybe black-on-white. He wore sandals and carried baskets; both were made from yucca plants.

People of

by
Lois
Terry

Bones and stones he used for knives, needles, axes, and arrowheads.

Because water was scarce, the mesa dweller dug deep wells in the sandy valley and built basins by damming the arroyos. When all else failed, he turned to his religion.

Plants and animals, as well as men, had souls. A Mogollon believed that the forces of nature could be controlled by proper performance of ancient rites, passed from the spirits down through generations. For "something new" on the religious scene, there were underground kivas, ceremonial chambers, which made their appearance after 1100 A.D. In religion, as well as in secular life, the Mogollon sought harmony with nature.

The site of his seeking can be visited today in Gran Quivira National Monument. It is the Pueblo de las Humananas, which was named by Spanish explorers who were next to arrive on the mesa.

Tales of vast wealth to the north had inspired the Spanish to push up the Rio Grande roadway from Mexico City to

Gran Quivira

many parts of the Southwest. Coronado's quest for riches in "The Land of Quivira" had come to a disappointing climax in 1541 with the discovery of Quivira in what is now central Kansas. Instead of treasure houses of gold, Coronado found only Indian teepees. But his expedition had come within 40 miles of the place which is now officially called Gran Quivira.

In 1598, Juan de Onate, a wealthy Spanish nobleman of Mexico, whose charge was a challenging one: "Colonize New Mexico and convert the heathen Indians to the Catholic Faith," made the first known visit to the Pueblo de las Humanas.

The Spanish crown's approach to colonization called for replacement of Indian ways with Spanish ways—economic, political, and religious. Franciscan padres visited pueblos, introducing Catholicism and establishing missions which were actually entire communities, including industrial and agricultural schools, farming and grazing lands, weaving rooms, and religious instruction centers.



Archeologists recently reset the original pine beam over the entrance to San Buenaventura Mission. Visitor's Center contains exhibits and is open year-round.

Onate's expedition, which he financed himself under a contract with the viceroy of Mexico, included 83 wagons, 400 men, women and children, 7000 head of livestock, 8 Franciscan padres and 4 lay brothers. They began their northward march in January, 1598, and Onate hurried on ahead to explore the country. It was in October that he visited the Pueblo de las Humanas. Exactly how long he stayed there is not known.

Records of Spanish missionary activity at Gran Quivira are also sketchy. It is first mentioned in 1626, as a visitation point of the mission of Abo, 20 miles northwest. In 1627, Fray Alonso de Benavides entered the Humanas pueblo on the Day of San Isidro. Three years later, Father Letrado built an impressive church which he dedicated to San Isidro. Transferred to Zuni in February of 1632, Father Letrado was murdered one week later. The Zunis did not take kindly to conversion.

It was Father Diego Santander who enlarged the facilities in 1659 and rededicated the mission to San Buenaventura.

From 1666 to 1669, the mission was served by Father Paredes. There is no record of any priest between that time and the mission's abandonment in the early 1670s.

If one had been a resident of Gran Quivira during the padres' period, he would have learned some new ways: wheat bread cooked in beehive ovens; wool for weaving—from cattle, sheep and goats; Catholic saints to add to his supernatural spirits; an elective governor system—which never did succeed. And, if the saints and spirits were with him, he might have survived the drought (1666-70) and accompanying famine and pestilence; he might, also, have survived the increasing Apache raids to move with the remaining Indians of the Pueblo de las Humanas into the Socorro region of the Rio Grande Valley, to live among friends who spoke his language.

He would not return to his ancestral home on the Chupadera ridge, but his life would be long remembered—by the things he left behind. □

Rambling on Rocks

by Glenn
and Martha Vargas

THE WESTERN portion of the United States contains numerous areas where petrified wood may be found. These are loosely termed petrified forests. Many of these are made up of trees, logs, etc., that are opalized. To the mineralogist this is known as wood opal. Of the areas where wood opal is common, the state of Nevada has a large share. Many small desert valleys, remnants of prehistoric lakes, are popular collecting areas. The Gabbs Valley, a dry lake near the town of Wellington; a large area at the foot of the Charleston Mountains, and Virgin Valley are among the best known of these locations.

By far the most interesting is Virgin Valley, and it has been a MUST for many avid mineral collectors. Surprisingly though, only a few collectors have made the trip to Virgin Valley as it is in a very remote section of northern Nevada. Three roads lead to the valley, and, until recently, only one was paved. The best

approach is through Winnemucca, and one travels to the northwest. From California go through Cedarville, Calif., but it is long and arduous, and only recently paved. The third route is south through Oregon, over a little traveled area on very primitive roads. Virgin Valley is situated on the fringe of one of the federal government's antelope refuges. However, this offers no problem to the visitor searching for wood opal.

The valley is an eroded flood plane, with the usual formation a soft siltstone. The sediments that formed the siltstone were a fine volcanic ash washed in during one of the recent eras of geologic history. Along with the sediments came many trees and shrubs, and there is the possibility that many smaller plants grew there also. As the sediments piled one on top of the other, native plants, as well as those that were washed in, were buried in what was evidently a shallow lake. Evidence of the lake are fish fossils found within the confines of the valley. Certain layers hold more plant remains than others, depending upon what and how much was being brought in at the time. Finally, the stream or streams bringing this wealth of floating material subsided, and then ceased to flow. At this point, the formation of the wood opal began, following generally the process described in an earlier column.

The greatest part of the material here is simply wood opal, some very soft and fibrous. Such material was not completely preserved, allowing the wood structure to rot away in recent years. The mounds and stream beds of the valley are strewn with it. Many of the banks and promontories have piles of white or near white wood that looks as if someone split logs



into kindling wood. The fracturing along the wood grain is nearly identical to that when ordinary wood is split with an axe. Sometimes the ends of these pieces are soft and much resemble the tip of a paint brush. This hair-like structure is the pure strands of opal that filled the cellular spaces and are now evident because the surrounding wood has rotted away. Some of the wood has such faithful detail that paleontologists have found the area very interesting. Imagine a grape stem (probably one of the native plants), complete with tendrils and leaf scars, now preserved with opal. Many other species of perfectly preserved plants are also represented.

An interesting relationship between undecayed and decayed wood occurs here. Any undecayed wood is usually quite faithfully preserved as stated above, resembling the original wood in texture and color. If instead, the wood is decayed to any extent, the remaining cavities were filled with a highly transparent opal. Most of this is lumps of precious opal. Virgin Valley precious opal has a color range from red through green and blue to purple and even black. Authorities state this precious opal, as far as color is concerned, is not surpassed by any opal found elsewhere in the world. In our minds this is an understatement! It is no wonder this opal field is well known.

ONLY GOLD LOOKS LIKE GOLD!

ONLY THE WHITE'S S-63 TR DELUXE offers these outstanding features:

No finer instrument
available at this price!

- ★ ALL TRANSISTORIZED SOLID STATE CIRCUITRY
- ★ SENSITIVE WATERPROOF LOOP CAN BE USED IN WATER
- ★ SIMPLE TO OPERATE
- ★ EASY BUDGET TERMS
- ★ TWO-YEAR GUARANTEE

\$179.50

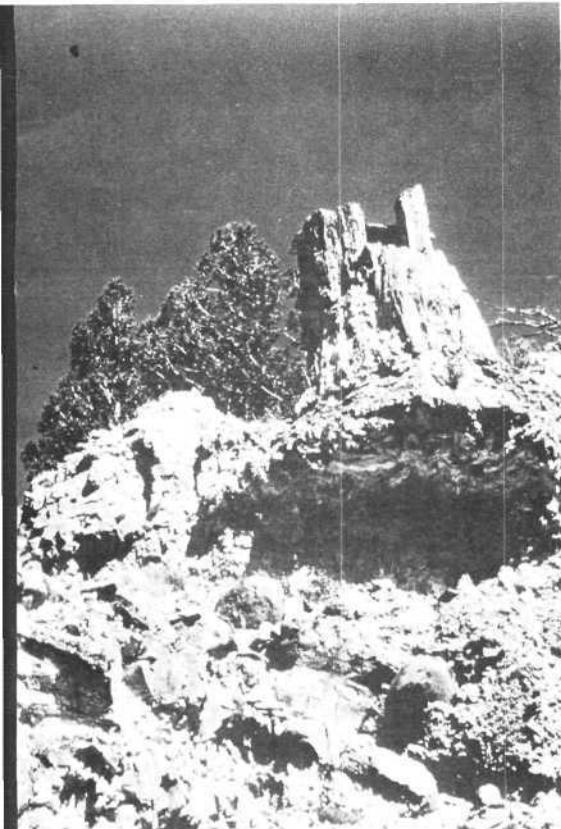


Locate coins, jewelry, relics, natural gold, and silver nuggets. This "quality-engineered" detector features an all-transistor, solid state circuitry, waterproof 3-in-1 loop; and ease of operation. Send for FREE LITERATURE

Use your BankAmericard or Master Charge

WHITE'S ELECTRONICS, INC.

Room 121
1011 Pleasant Valley Rd.
Sweet Home, Oregon 97386



Petrified wood is found in numerous areas of the western United States, some of which are still open to collectors.

son family of Scottsdale, Arizona, who have been working it commercially. Most of the specimens they sell are submerged in a small bottle, especially designed for display purposes. Even though the specimens must be kept in water, the market for it is good with sales and supply keeping pace.

The demand for opal among collectors has been such that the Hodgsons allow persons to dig on one portion of the mine—for a fee. Collectors have taken advantage of this opportunity, and very few of them have come away disappointed. In order to help diggers, extensive work with heavy equipment has been done each spring to remove waste and expose new ground.

On the rare occasions that a piece of Virgin Valley opal does yield a gemstone, it is an exquisite thing indeed. The play of color will compare very favorably with the finest opal found anywhere. Cut stones are a real rarity, and nearly all specimens in collections are kept constantly in water. Even though this method is a nuisance, the specimens, when displayed in a suitable container are a sight to leave one breathless. The almost complete spectral play of color is reward enough. One does not need a cut stone to get the full effect from this opal. □

Many of these fiery pieces are perfect casts of a piece of wood that had entirely rotted away before the opal was introduced. Some were fir limbs about the size of a short pencil, with all leaf bases perfectly cast, and the whole thing blazing red and green opal. A number of small fir cones have been found, complete with all parts, and again in precious opal. In most cases, the precious opal is in chunks, sometimes above fist size, solid colorful opal with or without the surface configuration of the wood that was originally buried. Partial limbs of brown opal of a woody color, covered with transparent dewdrop-like lumps of precious hyalite opal are common. We have had the privilege of collecting some of these.

The opal contains a high percentage of water, and thus practically all pieces crack and fall apart as soon as they are allowed to dry. The only satisfactory method of keeping these beauties is to place them in a jar of water. Many methods of curing the opal have been tried. Slow drying in air or other liquids is the most common approach. Slow drying in air is probably more successful than realized—we have seen it work on a number of occasions. On the other hand, who would take a nice large piece "jumping" with many colors and take the chance of completely ruining it?

The Rainbow Ridge Mine, probably the best producer, is owned by the Hodg-



DECORATIVE WAGON WHEELS

Authentic reproduction: Wood with metal tire and hub bands. Rustic brown oil stain finish. Indoor-outdoor use. Wheel diameter 36 inches.

\$39.95 Postpaid west of the Rockies

FREE Information

RELIC REPLICAS

Dept. D, 5901 Williams Hwy.
Grants Pass, Oregon 97526

GOLD! YOU FIND IT WITH KOVACS CUSTOM MADE METAL DETECTORS

HIKER 11T. All Transistor \$185.00

Detect Placer Gold, Lode Veins, Coins
Interchangeable waterproof Loops

4 YEARS WARRANTY- FREE LITERATURE

Now available underwater Metal Detector

MIKE KOVACS

10123 Stonehurst Ave. Ph. (213) 768-0114
Sun Valley, Calif. 91352

FREE CATALOG

FUN & PROFIT

WITH

METAL DETECTORS

GOLDAK, WHITE'S, DETECTRON, RAYSCOPE

Prospecting and Hiking Equipment
Books — Topo Maps

FREE—Indexes for Topo Maps, stock Western states, each state has index.

JACOBSEN SUPPLIERS

9322 California Ave., South Gate, Calif.
Phone 569-8041 90280

Desert

SUBSCRIPTION FORM

PALM DESERT, CALIFORNIA 92260

ENTER A NEW SUBSCRIPTION

RENEW MY PRESENT SUBSCRIPTION

NAME _____

ZIP CODE _____

ADDRESS _____

SEND GIFT SUBSCRIPTION TO:

NAME _____

ADDRESS _____

Sign Gift Card: "From"

One Year \$5.00

Two Years \$9.50

Three Years \$13.00

(Or 2 One Years)

(Or Three One Years)

PAYMENT ENCLOSED

BILL ME LATER

ALSO SEND DESERT'S 12-ISSUE HANDSOME BROWN VINYL BINDER FOR \$3.50
(includes tax and postage)

Date Binder(s) with Year(s) _____

Undated

Woman's Viewpoint



A YEAR AGO this month I began writing Woman's Viewpoint. Last fall I wondered if readers ever really took time to write magazine editors. This year I know they do—and how I appreciate it! As each deadline rolls around and the manuscript is sealed in its brown envelope and mailed, I start to wonder what to write for the next issue. Somehow during the next 30 days an idea pops up, recipes pour in, or a reader shares an idea that is perfect for Woman's Viewpoint. Thanks.

As the second year begins, if you readers have a question, suggestion or criticism to improve our column, let's hear from you. I have a question maybe you can answer. At gift shops they sell small gold coated leaves made into jewelry. Does anyone know how the leaves are coated and with what? They would make ideal gifts and so easy to mail.

Have you been collecting material for crafts? Early fall is the prime time to harvest pods, weeds, cones and seeds. Don't let your husband talk you out of stopping to gather a few prickly Douglas Fir cones or a handful of round black Jimson seeds. When you get the urge to create a wreath, centerpiece, mosaic or other masterpiece this winter you'll be glad you took the time to collect in the fall.

Seed crafts are particularly fun because everyone from 3 to 103 can participate. The projects are inexpensive and yet good looking. Seeds, tweezers, glue and a background are all that is needed.

The project can be simple. Cover that beat-up wastebasket with burlap and let your child make a border at the top and bottom with rows of different seeds. Pre-schoolers will spend hours decorating painted juice cans with large melon seeds, beans and cloves. How proud little ones are of the pencil holder they decorate themselves.

Grown-ups may want to tackle a seed mosaic. Designs can be copied from a child's coloring book, calendar or magazine picture. Fabric, wall paneling and cork make attractive backgrounds. Or the background can be filled in with seeds but this means extra work and often detracts from the main design.

In the illustrated pheasant mosaic the seeds are glued to a rectangle of $\frac{3}{4}$ -inch plywood. The beveled edges are painted dull black, thus eliminating the need for a frame. Soft earthy shades of western birds are especially attractive for seed pictures. An owl mosaic has a three-dimensional effect by using part of a styrofoam

seeds will need to be washed and dried before they can be used.

Feed and pet stores carry seeds—plump golden wheat, millet and oats. In the fall, garden stores occasionally sell seeds at bargain prices. This is a good time and place to obtain crinkled black onion seeds.

The muted shades and coarse texture of a seed mosaic will look great in most casual decors, especially modern and early American—although I noticed an exquisite rice mosaic in a formal French provincial living room. A floral painting of pink and red roses had been covered with rice tinted the exact shade as the oil paints. The rice was glued over the painting in the same direction as brush strokes. The mosaic in its ornate gold frame resembled beadwork or fine needlepoint from a few feet away.

If your family tries a seed project this fall be sure they DO NOT eat any seeds. The ones gathered in the backyard or countryside may be poisonous.



In this pheasant mosaic, seeds were glued to plywood and beveled edges painted black. Seeds give the mosaic a three-dimensional effect.

ball for the body. Overlapping sunflower seeds are glued on the ball for feathers.

A divided lazy-susan is marvelous to keep the seeds separated and accessible. Egg cartons and muffin tins also make handy containers.

After the design is traced onto the background with chalk or pencil the fun begins—choosing the perfect seed color and texture for each spot. Besides using seeds gathered in the hills, raid the kitchen for rice (which can be dyed any color with food coloring), barley, split peas, peppercorns and various beans. Plan a meal using several types of melon and fresh pumpkin pie and you'll have plenty of seeds for flower petals. The

Last year Miriam Cameron of Rialto, California, sent this autumn centerpiece suggestion. It arrived a bit late so it was saved for this year. Set a large pumpkin in the center of a tray and surround it with cones, leaves, acorns and sprigs of milk weed. "The adults loved it and the children were hard put to keep 'hands off'."

Jane Swazey of Seattle, Washington, says "cattails will stay firm longer when coated with hair spray." □

Jane A. Robison



The oak-studded Palomar Observatory Campground is operated by the U.S. Forestry Service and has spacious camping sites.

LAND OF MANY PLEASURES

Continued from page 17

S-7 east, down the sloping backside of the mountains into the Lake Henshaw basin. Lake Henshaw is one of the largest impoundments in San Diego County and offers good fishing for most varieties of fresh water fish. Boats are available at the lake, and fishing tackle, meals and picnic supplies can be purchased at the resort. Cabins, trailer spaces and camping spots are also available at the lake.

Making Lake Henshaw the eastern point of your loop trip, turn west again along State 76. For the next 14 miles the highway runs beside the San Luis Rey River, which drains from Lake Henshaw.

This scenic little river is stocked each week with trout by the State Department of Fish and Game. The Forest Service campground is about two miles west of Lake Henshaw and plenty of scenic picnic spots can be found along the river's edge next to the highway. The La Jolla Indians have developed river camping units to the west of the Forest Service camp, offering enjoyable camping and fishing at reasonable rates.

Following State 76 west will bring you back to the S-6 route up Palomar

Mountain, or take you back to U.S. 395.

During the summer months, portions of the National Forest around Palomar Mountain are closed to public entry because of fire hazard. These trails are usually marked, but to be safe obtain a forest map from the fire station near the Palomar Observatory.

This detailed map is also of great value in planning your visit to see all of the high points offered in this "Land of Many Pleasures." □

FREE HANDBOOK

1971 ISSUE "GEM MAKING AS A HOBBY"

A new and exciting information handbook featuring basic ideas on the rock hobby. Includes prices on the newest in lapidary equipment.

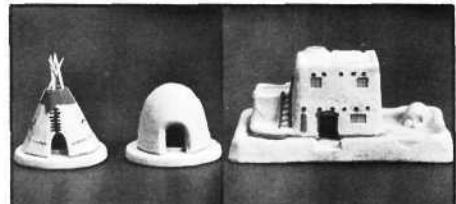
WRITE TO:



**STAR DIAMOND
INDUSTRIES, INC.**

1421D WEST 240 STREET
HARBOR CITY, CALIFORNIA 90710
TELEPHONE 421-3132 325-9696

A DIVISION OF THE CRAFTOOL COMPANY



ADOBÉ INCENSE BURNERS

Includes Juniper or Pinon Incense
CASA, TEEPEE or HORNO (Oven)

\$2.50 post paid

San Clemente Sales

212 W. Valencia, San Clemente, Calif. 92672

The Desert Explorer

Keene Dredges and Drywashers

Prospectors Equipment

Whites Metal Locators — Sale or Rental

New wall map showing all known Gold deposits in Arizona, overlaid on current State Highway Dept. map, \$2.00 plus 25¢ postage and handling.

Arizona residents include 4% state tax.

BankAmericard and Master Charge accepted.
Convenient budget terms available.

118 E. Roosevelt, PHOENIX, ARIZONA
Phone (602) 252-4770

ORDER NOW FOR CHRISTMAS

GENUINE GOLD WIRE

Robinson

NAME PIN AND JEWELERY

Quality Lifetime Guaranteed! Hand Made Especially for You

Any Name Each \$1.50; with Birthstone \$2.00

(STATE MONTH OR COLOR OR GOLDEN CROSS)

Write for FREE Christmas Catalog

Est. 1939

F. "GOLDWIRE" ROBINSON

BOX 3939, DESERT SAGE, MESA, ARIZONA 85207

PHONE 602-986-1729

JEWELRY CRAFTS CATALOG

FREE! 196 pages

GET CRAFT'S BIGGEST CATALOG

Lapidary—rockhounding
jewelry making... add up to a fascinating creative art!

SEND FOR FREE CATALOG

World's largest selection—over 10,000 items offered...imports from all parts of the world.

STONES—JEWELRY MATERIALS—MOUNTINGS
BOOKS—CRAFT TOOLS—MACHINERY—SUPPLIES—ETC.

GRIEGER'S, INC.

Dept. 52 —1633 E. Walnut — Pasadena, Calif.

**Authorized
JEEP
Sales and Service**

LARGEST SUPPLY OF
NEW AND USED JEEP PARTS
IN THE WEST.

Looking for a Jeep—Try us!

BRIAN CHUCHUA'S
FOUR WHEEL DRIVE CENTER
Dept. DM 1625 S. Harbor Blvd.
Fullerton, California

METAL LOCATORS

By



Both Spanish pioneers and Indians are buried in the Mission cemetery. Graves are decorated on All Souls Day, Nov. 2. Another annual event is the colorful Corpus Christi Fiesta. Held 60 days after Easter, it attracts thousands of visitors.

PALA

Continued from page 21

tized, married and buried members of the Pala Mission during these trying times.

In 1877, a patent to the entire Pala Mission was given to a Mr. William Veal. His wife, being a Catholic, persuaded her husband to return the chapel, two rooms and the cemetery to the Church.

On Christmas Day, 1899, an earthquake shook the valley, severely damaging the Mission Chapel and collapsing the roof of the sanctuary. But this was the end of the stormy days.

The plight of the Mission and the valiant members was brought to the attention of the Landmarks Club of Southern California whose purpose was to "conserve the Missions and other historic landmarks of Southern California." They purchased the remainder of the main quadrangle and started restoration.

The work was done by the Pala and Cupeno Indians. The Cupenos had just arrived after having been evicted from their village of Cupa (Warner Hot Springs) in May, 1903. A resident priest was then assigned and activities increased. Peace was once again restored—but not for long.

In 1916 when San Diego hired George Hatfield to bring much needed water to

the area, the alleged rainmaker outdid himself and flooded the entire basin. The flood washed away the adobe base of the campanile and the bells and tower came tumbling down.

The faithful Indians immediately recovered the bell and most of the floating structure and rebuilt the campanile which was rededicated exactly one hundred years after the Mission San Antonio de Pala first opened its doors to the faithful. It was that faith that has kept the Pala Mission alive so today it can serve the residents of Pala Valley and weary travelers just as it has for the past 156 years. □

**OFF ROAD EQUIPMENT
CATALOG**



FREE

FOR DUNE BUGGY OWNERS

4 WHEEL DRIVE ENTHUSIASTS

CAMPERS - HUNTERS - FISHERMEN

52 Pages of goodies - Priced Right!

**ARMSTRONG
NORSEMAN** BAJA-PROVED
4 Ply 10.1" Wide 29.5" O.D.
2 Tires 8 & 9" Wide Wheels \$98.95
FED. EXCISE TAX INCLUDED. WE SHIP ANYWHERE.



DICK CEPEK (213)
559-1675
P.O. BOX 1181 9201 CALIFORNIA AVE.
SOUTH GATE, CALIFORNIA 90280

Name _____
Address _____
City _____ State _____ Zip _____
NO ZIP NO FREE CATALOG

Desert Life
by Hans Baerwald

Even though he used a 600mm lens, Hans Baerwald spent weeks gaining the confidence of these Burrowing Owlets before they would pose for this family portrait. Photo taken with Exacta camera, Plus-X film, f8 at 125.



The Trading Post Classified Ads

• BOOKS - MAGAZINES

OUT-OF-PRINT books at lowest prices! You name it—we find it! Western Americana, desert and Indian books a specialty. Send us your wants. No obligation. International Bookfinders, Box 3003-D, Beverly Hills, Calif.

WILD & WOOLLY WEST BOOKS: Indians, Ghost Towns, Old Trains, Prospecting, Mark Twain, Yukon Poems, etc. Send stamp for illustrated catalog, or \$1.00 for sample illustrated book on the Wild West. Filter Press, Box 5D, Palmer Lake, Colorado 80133.

"OVERLOOKED FORTUNES" in minerals and gem stones; here are a few of the 300 or more you may be overlooking: uranium, vanadium, tin, tungsten, columbium, tantalum, nickel, cobalt, gold, silver, platinum, iridium, beryllium, emeralds, etc. Some worth \$1 to \$2 a pound, others \$25 to \$200 per ounce; an emerald the size of your thumb may be worth \$1000 or more; learn how to find, identify and cash in on them. New simple system. Send for free copy "Overlooked Fortunes in Minerals," it may lead to knowledge which may make you rich! Duke's Research Laboratory, Box 666-B, Truth or Consequences, New Mexico 87901.

LOST DESERT GOLD, legendary and geological history of the southern California desert, with photos and maps to pinpoint locations. \$2.50 postpaid. Gedco Publishing Co., Box 67, Bellflower, Calif. 90706.

"UPPER MOJAVE DESERT," first book to reveal route of extinct Tonopah-Tidewater Railroad, original names of present towns and cities, the Borax story, biographies of pioneers. Hardbound. Many priceless photos. Only \$4.95 postpaid from author: Mary O'Conley, Baker, Calif. 92309.

RIVER OF GOLD, the richest treasure of them all. A new book "Treasure Travels" contains all new photos, maps and other valuable information on California's most fabulous treasure. \$3 postpaid. Gedco Publishing Co., Box 67, Bellflower, Calif. 90706.

DESERT MAGAZINES—send self-addressed envelope for list of back issues being disposed of. Jim Terra, 89 North 9th Street, San Jose, Calif. 95112.

"GEMS & MINERALS," the monthly guide to gems, minerals, and rock hobby fun. \$4.50 year. Sample 25c. Gems & Minerals, Mentone, Calif. 92359.

SURVIVAL BOOKS! Guerrilla Warfare, Wilderness Living, Medical, Guns, Self Defense, Nature. Books—Vital, Fascinating, Extraordinary; Catalog free. Adobe Hacienda, Route 3, Box 517A, Glendale, Arizona 85301.

AMERICA BY CAR tells you what to see and where to go in every corner of the U.S. Lists scenic roads, important sights, best places to eat and stay. Discover this great country by car. #HP-20T-2—only \$2.95. Davis & Son, Dept. 7084 Midtown Station, Portsmouth, Virginia 23707.

GOLD HOBBY—the book for prospectors; plans for famous folding drywasher, test for unseen gold, some desert dangers to be aware of. Hard back, \$3.95 and 30c handling fee. P. O. Box 4195, Torrance, Calif. 90510.

TRUE WEST, No. 1 to 70; "Frontier Times" No. 1 to 35—make offer. C. E. Miller, P.O. Box 34, Oakhurst, Calif. 93644.

FREE 128 page catalog on detectors, books and maps. General Electronic Detection Co., 16238 Lakewood Blvd., Bellflower, Calif. 90706.

• BOOKS - MAGAZINES

DESERT MAGAZINE, January 1941 through March 1962; lacking April, June, July 1944; July through December 1952; 3 copies stained; plus February (clipped), May, September 1940; plus three duplicates. 19 volumes are perfect. \$175 express collect. Long runs Lapidary Journal, Arizona Highways. Ben Cash, 211 Montclaire, N. E., Albuquerque, New Mexico 87108.

OLD BOTTLES PROFITABLE! "1200 Old Medicine Bottles" Bartholomew, prices current, descriptions, illustrated, \$3.95; "1001 Biters Bottles", Bartholomew, PC, \$4.95; "Old American Bottles," Barber (1900) \$3.00; "American Bottles Old and New" Walbridge (1920) \$3.95; "Wonders of Glass and Bottle Making" Sauzay (1871) 236pp, 44 engravings, \$5.00; "Manufacturing and Bottling Carbonated Beverages" Tufts (c1885) \$3.50; "Hostettler's Almanac" (1883) \$1.95. Postpaid. Frontier Books, Fort Davis, Texas 79734.

"DEAD MEN DO Tell Tales" By Lake Erie Schaefer. Facts about Frank Fish's mysterious death, still unexplained. Sequel to "Buried Treasure & Lost Mines" the Treasure Hunters manual. \$3 postpaid. L. Erie Schaefer, 14728 Peyton Drive, Chino, Calif. 91710.

SOME NEED TANGIBLE reason to visit boondocks. Old bottle hobby furnishes profitable motive. "Old Bottle Magazine" provides necessary knowledge. \$5.00 delivers twelve invaluable issues. OBX, Box 243-D, Bend, Oregon 97701.

ANTIQUE BARBED WIRE Identification Handbook; 200 wires illustrated, \$1.00. My sketch list catalogue 25c. Wire Sales, Box 6392-P, Bakersfield, Calif. 93306.

GUIDE TO MEXICO'S gems and minerals: localities, mines, maps, directions, contacts. English-Spanish glossary, too. \$2.00 postpaid. Gemac, Mentone, Calif. 92359.

DESERT MAGAZINE: Vol. 1 through 31, complete through 1968; 3 in binders. Sound condition. \$135 postpaid. J. L. Keel, 119 N. Bemiston, Clayton, Mo. 63105.

• BUSINESS

OPPORTUNITY! WRITING FILLERS. Tells how, what to write. Includes Directory telling where to sell your articles. Send \$1.00. Dubois, 305 Swan Avenue, Houma, Louisiana 70360.

GOLD WIRE JEWELRY NAMES!! Finest workmanship and quality!! Send name, with \$1 for sample and sales kit. Goldwire, P. O. Box 1001, Apache Junction, Arizona 85220.

• EQUIPMENT

GOLD DRY Washer plans, portable hand operated, recover gold from gold diggings, from dry river beds, etc., by air principle. \$2.00. R. Bown, P.O. Box 791, Arcadia, Calif. 91006

FOR SALE: Gula's gold dry washers. All one unit, 52 lbs., with motor, \$225.00. F.O.B. 9884 Coalanga, Montclair, Calif. 91763. Phone (714) 626-6948.

DRYWASHERS, GOLD PANS, metal detectors, books, custom Jeep seats, etc. Send for literature. Hoffman's Desert Products, Box 402, La Mirada, California, or see display at 13244 Whittier Blvd., Whittier, Calif.

HOW TO PLACE YOUR AD

★ Mail your copy and first-insertion remittance to: Trading Post, Desert Magazine, Palm Desert, California 92260. Classified rates are 25c per word, \$5 minimum per insertion.

DEADLINE FOR CLASSIFIED ADS IS 10TH OF SECOND MONTH PRECEDING COVER DATE.

• EQUIPMENT

LAND CRUISING and Prospecting, a 1908 reprint, only \$2.50 ppd. Quality 14" gold pan, only \$3.50 ppd. California, please add 5% sales tax. R. E. Yandell, Dept. D, P. O. Box 2786, San Bernardino, Calif. 92406.

1963 WILLYS JEEP—Good condition. Four cyl. Heater. Submit offer to Desert Magazine, Dept. CJ5 or phone 714 347-9214.

• GEMS

SHAMROCK ROCK SHOP, 593 West La Cadena Drive, Riverside, California 92501. Parallel to Riverside Freeway. Phone 686-3956. Come in and browse; jewelry mountings, chains, supplies, minerals, slabs, rough material, equipment, black lights, metal detectors, maps, rock and bottle books.

ROCKHOUND SPECIALS! 30 different beautifully polished agates, etc., \$3.00; 15 different named mineral stones, \$2.00. Both units, \$4.50. Ernie Phillips, Box 131 Banning, Calif. 92220.

POCKET GOLD, \$2. Placer gold, \$2. Gold dust, \$1. Attractively displayed. Postpaid. Money-back guarantee. Lester Lea, Box 237D, Mt. Shasta, California 96067.

• INDIAN GOODS

FINE RESERVATION-MADE Navajo, Zuni, Hopi jewelry. Old pawn and Kachina dolls. Navajo rugs, Yei blankets, Chimayo blankets and vests, pottery. Kaibab moccasins. A collector's paradise! Open daily 10 to 5:30, closed Mondays. Buffalo Trading Post, Highway 18, P.O. Box 697, Apple Valley, Calif. 92307.

AUTHENTIC INDIAN jewelry, Navajo rugs, Chimayo blankets, squaw boots. Collector's items. Closed Tuesdays. Pow-Wow Indian Trading Post, 19967 Ventura Blvd., East Woodland Hills, Calif. Open Sundays.

STONE SPEAR, 20 inches long (wide blade) flint. Price \$100.00 to collectors. Donald E. Doyle, 2140 Medford Ave., Escondido, Calif. 92025.

WANTED BY private party: old northwest Indian totems and masks. Also Apache baskets. Write: E. Silver, 1121 Avalon, Wilmington, Calif. 90744.

• JEWELERY

CHRISTMAS JEWELRY SALE. Price lists available. Free Christmas earrings with each order of \$2 or more. Jean's Jewelry, Box 1101, Glendale, Arizona 85301.

• MAPS

OVERVIEW OF MOJAVE Desert Map, new two color, 22x35 inch map on topo base. Features Ghost Towns, Mining Camps, Historic Trails and Routes, Abandoned Railroads, Indian Sites, Geology and Special Back Country to Explore. Price: \$3.00 folded, \$3.25 rolled. Desert Enterprises, Box 286-D, Ontario, Calif. 91764.

HOSTELLS: Southern California and southeast Nevada regions. Old T&T railroad map of the early 1900s. \$1.95 ppd. PhoCar, Box 5743, Pasadena, Calif. 91107.

• MAPS

"THE ROAD MAP TO California Pioneer Towns, Ghost Towns, and Mining Camps"—over 400 places with index classifying and describing town or site. Folded or rolled, \$2.95. "The Road Map to Lost Mines and Buried Treasures of California"—127 locations with text providing best available clues. Folded only. \$4.00. California residents add 5% sales tax. Both maps for \$6.50. Varna Enterprises, P. O. Box 2216, Dept. A, Van Nuys, Calif. 91404.

SECTIONIZED COUNTY maps — San Bernardino \$3; Riverside \$1; Imperial, small \$1, large \$2; San Diego \$1.25; Inyo \$2.50; Kern \$1.25, other California counties \$1.25 each. Nevada counties \$1 each. Include 5 percent sales tax. Topographic maps of all mapped western areas. Westwide Maps Co., 114 West Third Street, Los Angeles 13, California.

PROSPECTORS, ROCKHOUNDS, CAMPERS! Rand McNally Western Campground and Trailering Guide, \$1.95 plus 25c mailing charge. California residents add 5% sales tax. Mason Map Service, P. O. Box 781, San Gabriel, Calif. 91778.

• MINING

ASSAYS: COMPLETE, accurate, guaranteed. Highest quality spectrographic. Only \$5.00 per sample. Reed Engineering, Box 121, Wrightwood, California 92397.

ASSAYS: GOLD and silver, \$3.00. Gold, silver, lead and copper—combined assay—\$4.00. Spectograph, \$5.00. Utah Assaying Co., Box 146, Wendover, Utah 84083.

• OLD COINS, STAMPS

RARE 1878 CC Dollar \$5.00. P, O or S mint \$3.00 each. Illustrated 65 page Catalogue of coins, 50c. N. Shultz, Box 746, Salt Lake City, Utah 84110.

• PHOTOS

SELL YOUR PHOTOS. Report tells how, where. Color slide markets. Only \$1.00. Goodfellow Sales, Dept. 6, 1609 Avenida Sirio, Tucson, Arizona 85710.

• PLANTS, SEEDS

FREE WILDFLOWER SEEDS. Send a self-addressed stamped envelope to Clyde Robin, P. O. Box 2091, Castro Valley, Calif. 94546. We will send you absolutely free a package of beautiful California Poppy seeds. Offer expires May 1971.

• REAL ESTATE

LAND EASY TERMS less than bank rates. Northwest Timbered Acreages as low as \$950 total price. 5-10-20-40 acres. For people who love the land—a tract of Recreation Land to have for your very own! In Northern Idaho, Northeastern Washington and Western Montana. In the heart of lakes and big game country. All covered with growing timber. Access and Title insurance with each tract. This is select land with natural beauty, recreational and investment values. Plan for the future and retirement recreation. We have tracts of many types and sizes from which to choose, including beautiful Northwest Waterfront property. Your inspection is welcomed. Write us for free list, maps and complete information. Write to: Dept. 3C, Re-forestation, Inc., P. O. Box 106, Opportunity Station, Spokane, Wash. 92214.

FOR SALE: New 2 bedroom and den cabin. Garage, patio, fireplace, 2 1/2 acres. F.A.P., P. O. Box 35, Pinon Hills, Calif. 92372.

• REAL ESTATE

FOR SALE—640 acres in Round Valley, Providence Mountains, San Bernardino County. Elevation 5200, trees, shallow water. Forty acres or more, averages \$80 acre, time payments. Phone (213) 426-6491. Murphy Brothers, 3520 Long Beach Blvd., Long Beach, Calif.

LARGE AERIAL photograph, and underground water depth chart, of your land. Mark on road map and send \$3.00 to: Security Enterprises, P. O. Box 2426, Santa Clara, Calif. 95051.

GOVERNMENT LANDS . . . low as \$1.00 acre! Million acres! For exclusive "Government Land Buyer's Guide" plus "Land Opportunity Review" listing lands available throughout U.S., send \$1.00. Satisfaction guaranteed. United Lands, 306-RJ Carry Building, Washington, D.C. 20005.

GOVERNMENT LANDS—low as \$1 acre. Millions acres! For exclusive copyrighted report—plus "Land Opportunity Digest" listing lands available throughout U.S., send \$1. Satisfaction guaranteed! Land Disposal, Box 9091-59, Washington, D.C. 20023.

GOVERNMENT PUBLIC LAND (400,000,000 acres) in 25 states. Low as \$1.00 acre. 1970 report. Details \$1.00. Land Information, 422DM Washington Building, Washington D.C. 20005.

• TREASURE FINDERS

FIND BURIED TREASURE with revolutionary patented, analytical metal detector. Features push button and automatic tuning, negligible ground pickup, greatest range. Free catalogue. Gardiner Electronics Co., Dept. 51, 4729 N. 7th Ave., Phoenix, Arizona 85013.

FREE TREASURE GUIDE! Fact-filled collectors edition; send 50¢ for postage. Also request free literature on ultrasensitive, professional Fisher Detectors, Fisher Research, Dept. D-10, Palo Alto, California 94303.

POWERFUL METROTECH locators detect gold, silver, coins, relics. Moneyback guarantee. Terms free information. Underground Explorations, Dept. 3A, Box 793, Menlo Park, Calif. 94025.

METAL DETECTORS: Detectron, Fisher, Goldak, Metrotech, Precision, Rayscope. Send for free information. Aurora Prospector Supply, 6286 Beach Blvd., Buena Park, Calif. 90620. (714) 521-6321.

TREASURE-METAL and mineral locators. Free 24 page booklet. GeoFinder Co., Box 37, Lakewood, Calif. 90714.

GOLDAK Treasure Locators—Pleasure and profit in a hobby you'll enjoy. Find coins, relics, gold, silver. Charge on BankameriCard. Goldak, Dept. DM, 1101-A Airway, Glendale, California 91201.

ROTH METAL LOCATORS—for pleasure and treasure. Authorized Roth dealer. Free information. Sonac Industries, Box DM-1202, Pomona, Calif. 91766.

FREE CATALOG EXANIMO—a name you can trust. Detectors, prospecting, treasure-hunting equipment, sporting goods. Exanimo, Segundo 2, Colorado 81070.

GHOST TOWN EXPLORERS: Over 400 Mother Lode locations in "California Pioneer Towns," \$2.50 postpaid. Goldbug, Box 588-D, Alamo, Calif. 94507.

FREE 128 page catalog on detectors, books and maps. General Electronic Detection Co., 16238 Lakewood Blvd., Bellflower, Calif. 90706.

WHITE'S GOLDFMASTER Metal-Mineral detectors. Sales and rentals. (Rental applies on purchase). Discount for cash. Bookman, 622 Orange, Redlands, California 92373. Phone 793-6112, 10 a.m.—5 p.m. Closed Tuesdays.

• TREASURE FINDERS

GOLD, SILVER, RELICS! Located with powerful Detectron Metal Detectors. Free information. Terms. Detectron, Dept. D-10, Box 243, San Gabriel, Calif. 91778.

• WESTERN GOODS

OLD BLUE GLASS telephone insulator makes excellent paperweight, etc. Mint condition. \$3.50 postpaid. K. Hill, 1880 Braemar Rd., Pasadena, Calif. 91103.

• MISCELLANEOUS

SLEEP—WITHOUT PILLS! Simple exercises. 64 page book, only \$1.00. The Gift Gallery, Dept. 3H, P. O. Box 38143, Dallas, Texas 75238.

WHERE TO RETIRE OR VACATION. Where costs are low! Norman Ford's 100,000 word book, "Off-the-Beaten-Path" covers hundreds of world Paradises. Only \$2.50. California residents include 5% tax. Ember Enterprises, Box D7, 10530 Encino Ave., Granada Hills, California 91344.

GERONIMO, SITTING BULL, Red Cloud—authentic 8x10 photo reprints of the original from National Archives, 50% off. All three only \$1.29. Unicus, Box 99-A, Lakewood, Calif. 90714.

GUMMED NAME AND address labels: 1000—\$1, 3000—\$2.25. Two week delivery. C. Friday, 4705 Adam Road, Santa Susana, Calif. 93063.

SAMOYED PUPPIES. Beautiful, intelligent, raised with children. Easily trained to pack supplies into the wilderness. J. D. Campbell, 1310 W. Cinnabar, Phoenix, Arizona 85201. Phone 602-944-8841.

PURPLE BOTTLES? How to color old glass indoors. Not an applied finish. Faster than sunlight. No danger of breakage. Complete instructions. \$1.00. Massey's, 5457 Pinehurst, Riverside, Calif. 92504.

ANTIQUES, RELICS, ETC. Turn old bargain pieces into beautiful antique show pieces. Learn the secrets of professional refinishing and restoring from this 190 page book for \$1. Nancy's Buy-Lines, Dept. X-4, Box 164, Huntington Park, Calif. 90255.

"ZOLAR" WORLD FAMOUS astrologer, horoscope, fortune-telling cards; 32 in all, amazing and amusing, \$2.98. Irvine, 1626 Catalina, Burbank, Calif. 91505.

SHOPPING BY MAIL is fun. Write for our free catalog "Gifts for Gracious Living." Ember Enterprises, 10530 Encino Ave., Granada Hills, Calif. 91344.

NEW, UNUSUAL, AMAZING artist pictograph system helps you to become a successful and admired artist—proud of the professionalism of your art. Saves time. Eliminates frustration. Straight forward. Easily understood. Step by step directions. Illustrated. A boon to artists or would be artists. Has commercial applications. \$2.95 plus 35¢ handling/postage or write for free details. Franklane Enterprises, Dept. D, 209 Corbett St., Carson City, Nevada 89701.

ROCKHOUND PARADISE. Why work picked-over areas? Explore Nevada's sparsely populated back-country. Bonanza for rock, fossil and mineral collectors. Brand new Nevada Rock Finder gazetteer, hot off the press. Chock full of accurate, complete details, locations, directions and maps by counties. Where to go and how to get there. Includes other valuable information and points of interest. Clearly written and easily understood. Send \$1.25 plus 15¢ handling/postage to Franklane Enterprises, 209 Corbett Street, Carson City, Nevada 89701.

Letters to the Editor



Letters requesting answers must include stamped self-addressed envelope.

Desert Safaris . . .

In regards to the new format with the "Desert Safari" you have adopted for Desert as in the August '70 issue, we would like to state our approval. We find it not a real departure from the past issues, and welcome the personal attention given to a specific area which will motivate us to plan to visit that particular area. Best wishes for continued success.

MRS. C. L. COGSWELL,
Twenty-nine Palms, California.

One of the fellows at my plant, who also subscribes to Desert, told me when your "Desert Safari" on Big Bear Lake first came out in the August issue he thought you were going commercial. I'm a fisherman and followed the article and went to Big Bear . . . my first visit. It was great, including the trout I caught. When your "Desert Safari" on the Mother Lode appeared in the September issue, this same guy told me "now they are on the ball . . . I'm going to spend my vacation in that area." I guess it's everyone to his own taste . . . so I suggest you keep calling the shots.

MAURY STEVENS,
Los Angeles, California.

4WD Information . . .

We have been subscribers to your wonderful magazine for the past several years. We enjoy it very much. However, we have always relied upon it for our information regarding 4-wheel-drive events taking place throughout the year and we recently note that you have not published this type of information for the past few months.

We have a 4-wheel-drive machine and would look forward to once again seeing coming events published in your magazine.

CORDY M. PIEPER,
Altadena, California.

In the last few issues of your magazine, you have omitted the Four Wheel Drive Chatter. I realize you may not have anyone to write the section, or maybe you may have production costs to cover, etc. But there are many people, including my jeep club, who read that section for information. The Four Wheel Drive Chatter was the first section I turned to when I received the magazine. Please let me know if you will have the 4WD column in the future.

UDO WINKLER,
Monterey Park, California.

Editor's Note: Since we reluctantly discontinued the Four-Wheel-Drive Chatter, we have had many letters asking when we would continue it and the Back Country Page—especially now that cool weather will soon return to the desert areas. Bill Bryan, our excellent former Back Country editor, became involved in competition racing and had to give up his writing. We are planning to reinstate the feature in the near future.

The Power of Words . . .

Printed matter is one of the primary ways one generation passes on its value systems to another. The article, "Doing Nutting," (Aug. '70) is no exception.

This article intimates that the Paiute Indians are ". . . primitive . . ." because they elect to wait until the pinyon cones fall from the trees to gather them, rather than (as the author's group did) ". . . whacked at the branches with long poles having hooks on the ends."

That this latter method of harvesting should be contemplated at all is unfortunate. But that it is exhibited as a positive behavioral example is tragic.

Question: Is this article in tune with your editorial policy of conservation?

Statement: Please print this letter in the next issue so that if some of your readers go pinyon nut hunting they will consider rejecting the techniques of gathering advocated by Elizabeth Beebe.

JOHN ERIC ANDERSON,
San Diego, California.

Editor's Note: Since Reader Anderson wants his letter printed, we are doing just that. However, as a teacher in the Speech Communication Department of San Diego State College, he should know it is not fair to take words out of context. The author of the article stated: "The Paiute Indians follow the procedure with more finesse in a primitive sort of way." She is NOT using the word primitive from an anthropological sense, but rather from the definition of "simple" or "plain" and is not degrading the Indians. As to the question is gathering pinyon nuts as described in tune with "your editorial policy of conservation" we can state the trees are not damaged any more than orange trees after being picked. We feel there is "nutting doing" any harm in "Doing Nutting."

Calendar of Western Events

This column is a public service and there is no charge for listing your event or meeting—so take advantage of the space by sending in your announcement. However, we must receive the information at least two months prior to the event. Be certain to furnish complete details.

SEPTEMBER 26 & 27, NORTH AMERICAN ROCK AND MINERAL Annual Show, 5353 West Imperial Highway, Los Angeles, California.

OCTOBER 2 - 4, AMERICAN INDIAN & WESTERN RELIC SHOW & SALE, Great Western Exhibit Center, 2120 South Eastern Ave., Los Angeles. Antique and modern Indian arts and crafts, artifacts and collectors' pieces, Western Americana, Pre Columbian and Alaskan items.

OCTOBER 3 & 4, HARVEST OF GEM SHOW sponsored by the Centinela Valley Gem and Mineral Club, Hawthorne Memorial Center, El Segundo Blvd. and Prairie Avenue, Hawthorne, California.

OCTOBER 3 & 4, PROSPECTORS' CLUB OF SOUTHERN CALIFORNIA 3rd Annual Convention, Pioneertown, Calif., 4 miles north of Yucca Valley on State Route 62 in Riverside County. Public invited to watch or participate. Open Competition Metal Detector Contest, Ladies Only Detector Contest, Amateur Gold Panning Contest and activities for children. Write Jack Dorler, 2717 Normalin St., Torrance, Calif. 90505.

OCTOBER 3 & 4, TREASURE ISLES SHOW sponsored by the Long Beach Gem and Mineral Society, Wardlow Park Club House, 3457 Stanbridge, Long Beach. Many unusual displays including black opal and rare jade. Working lapidary booth and door prizes. Write Perry Griffith, 225 East 6th St., Long Beach, Calif. 90812.

OCTOBER 7-11, VENTURA COUNTY FAIR, Ventura, (Calif.) Fairgrounds. Midway, rodeos, horseshows, live stock auction, exhibits, etc. Adults, \$1.00, children, 25 cents.

OCTOBER 8-18, FRESNO GEM & MINERAL SOCIETY'S 19th Annual Gem and Mineral Show, Fresno District Fairgrounds. Demonstrations, sales and food. Write Ed Myers, 3813 E. Shields, Fresno, Calif. 93726.

OCTOBER 18, LEATHERAMA sponsored by the Leathercraft Guild, Memorial Park, Orange Avenue and 3rd Street, Azusa, Calif. All types of leather goods, carving demonstrations. Free admission and free door prizes.

GOLDAK 'COMMANDER'

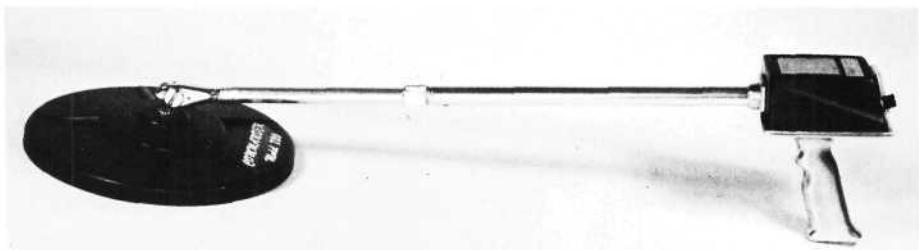
Model 720 Metal Locator



FEATURES:

Molded, rugged hi-impact plastic housed detection head and apparatus box. High quality miniature speaker with perforated protective cover radiates exclusive "Tell-Tone" signal. Heavy duty plated metal swivel adjusts to all positions thru 180 degrees. Coiled cable sealed inside telescoping handle; no exposed wires. Extends from 25 to 38 inches for operators of all sizes. Slanted control panel with easy-set, one knob adjustment control is readily accessible and visible to operator in all positions. Wide range sensitive meter, easy to read, works in conjunction with speaker or ear phones. Miniature headphone jack automatically cuts out speaker when headphone is inserted. Internal circuits fully transistorized. Concealed battery compartment houses standard 9-volt long life battery. Polished cast aluminum housing makes unit comfortable to handle over long periods of time . . . extremely rugged yet very light. Completely epoxy sealed to insure "All-Weather" operation. Weighs less than 4 lbs.

EFFECTIVE DEPTH RANGE (Under Normal Conditions) 3".....Bullet 7".....Penny 8-12".....Silver Dollar 18".....Pistol 24".....Jar of Coins 30".....Kettle 36".....Placer Gold Deposit 48".....Metal Chest 60" Large Metallic Object.



SEND FOR YOUR CATALOG
TODAY!

JJJ's Blue Book #17 is chock full of everything you need for prospecting rockhounding, lapidary or jewelry making. Thousands of jewelry items for the stones you find. \$1.00 or free with a \$5.00 order.

MODEL 720....NO. 247-8.....\$ 149.50*

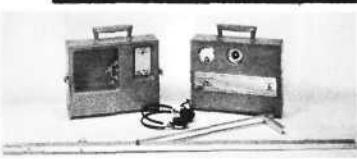
'COMMANDER Jr.'

..a low cost, lightweight version of the famous '720' same features, same performance characteristics but without speaker and meter ... equipped with headphones, one piece handle ready to operate

MODEL 820....NO. 247-7.....\$ 94.50*

Warranty

Goldak instruments are guaranteed to outperform similar competing devices and all carry a two year warranty against defects in workmanship and materials.



The 'BONANZA', a powerful transmitter-receiver type locator, is capable of pinpointing large metal objects, buried treasures, placer pockets, ore veins, etc., buried to depths as great as 20 feet. 'True-Power' battery checking system, depth indicator, rugged injection-molded 'Cycloc' cases, detailed instructions. Uses flashlight batteries, ready to operate. Rugged carrying case available as optional accessory. NO. 247-10....\$16.00*

'BONANZA'

Model 1100 Metal Locator

NO. 247-9.....\$ 175.00*



4959 YORK BLVD., LOS ANGELES, CALIFORNIA 90042



Prices subject to change without notice.

(Prices of mountings do not include stones; except as noted.)

MINUTE-MAN MAIL ORDER SYSTEM

Prices F.O.B. Los Angeles Add postage and insurance.
Add Sales Tax in California

Open Mon. thru Fri. 9 a.m. to 5:15 p.m.
Closed Saturday and Sunday



PHONE (213) 255-1488

LARGE LEVEL LOTS

WATER - POWER - TELEPHONE



\$795.00 FULL PRICE

\$20.00 Down & \$20.00 Per Month

GRAVEL STREETS

TRAILERS WELCOME

STAKED LOTS

NO CLOSING COSTS

NO INTEREST

\$100.00 OFF FOR CASH

SCHOOL BUS

DAILY MAIL SERVICE

FIRE PROTECTION

WRITE
TO

Elmer Butler

FREE MAPS
AND PICTURES

Box 486, Kingman, Arizona 86401

Park Your Trailer - Build Your Home - Hold For Investment

OFFICE OPEN SEVEN DAYS A WEEK